```
In [15]: import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
```

```
In [21]: import os

# Check the current working directory
print("Current Working Directory:", os.getcwd())

# List files in the current directory
print("Files in Current Directory:", os.listdir('.'))
```

Current Working Directory: /home/jovyan
Files in Current Directory: ['.npm', '.jupyter', '.ipython', 'getting-starte
d-guide_-_UW-JupyterHub-for-teaching.ipynb', 'Untitled.ipynb', 'Labs', '.con
fig', '.wget-hsts', 'Problem Sets', 'lost+found', '.cache', '.local', '.bash
_profile', 'Lavi Class Code', '.ipynb_checkpoints', 'project', 'info430']

1. Descriptive statistics

```
In [22]: data = pd.read_csv('/home/jovyan/project/historical_data.csv')
In [23]: data_info = data.info()
    missing_values = data.isna().sum()

features_of_interest = [
        'total_items', 'subtotal', 'num_distinct_items', 'min_item_price', 'max_
        'total_onshift_dashers', 'total_busy_dashers', 'total_outstanding_orders
        'estimated_order_place_duration', 'estimated_store_to_consumer_driving_c
]
    descriptive_stats = data[features_of_interest].describe()
    (data_info, missing_values, descriptive_stats)
```

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 197428 entries, 0 to 197427
Data columns (total 16 columns):

#	Column	Non-Null Count	Dtype
0	market_id	196441 non-null	float64
1	created_at	197428 non-null	object
2	actual_delivery_time	197421 non-null	object
3	store_id	197428 non-null	int64
4	store_primary_category	192668 non-null	object
5	order_protocol	196433 non-null	float64
6	total_items	197428 non-null	int64
7	subtotal	197428 non-null	int64
8	num_distinct_items	197428 non-null	int64
9	min_item_price	197428 non-null	int64
10	<pre>max_item_price</pre>	197428 non-null	int64
11	total_onshift_dashers	181166 non-null	float64
12	total_busy_dashers	181166 non-null	float64
13	total_outstanding_orders	181166 non-null	float64
14	estimated_order_place_duration	197428 non-null	int64
15	<pre>estimated_store_to_consumer_driving_duration</pre>	196902 non-null	float64
dtyp	es: float64(6), int64(7), object(3)		
memo	ry usage: 24.1+ MB		
: (No	one,		

Out[23]: (None,

market_id	987
created_at	0
actual_delivery_time	7
store_id	0
store_primary_category	4760
order_protocol	995
total_items	0
subtotal	0
num_distinct_items	0
min_item_price	0
<pre>max_item_price</pre>	0
total_onshift_dashers	16262
total_busy_dashers	16262
total_outstanding_orders	16262
estimated_order_place_duration	0
<pre>estimated_store_to_consumer_driving_duration dtype: int64,</pre>	526

num_distinct_items total_items subtotal min_item_price 197428.000000 197428.000000 count 197428.000000 197428.000000 3.196391 2682.331402 2.670791 686.218470 mean 2.666546 1823.093688 1.630255 522.038648 std min 1.000000 0.000000 1.000000 -86.000000 25% 2.000000 1400.000000 1.000000 299.000000 50% 3.000000 2200.000000 2.000000 595.000000 75% 4.000000 3395,000000 3,000000 949,000000 27100.000000 max 411.000000 20.000000 14700.000000

count mean std min 25% 50% 75% max	max_item_price 197428.000000 1159.588630 558.411377 0.000000 800.000000 1095.000000 1395.000000 14700.000000	_	hift_dashers 81166.000000 44.808093 34.526783 -4.000000 17.000000 37.000000 65.000000 171.000000	total_busy_dashers 181166.000000 41.739747 32.145733 -5.000000 15.000000 34.000000 62.000000 154.000000	\
count mean std min 25% 50% 75% max	1811	ng_orders 66.000000 58.050065 52.661830 -6.000000 17.000000 41.000000 85.000000	estimated_or	der_place_duration 197428.000000 308.560179 90.139653 0.000000 251.000000 251.000000 446.000000 2715.000000	\
count mean std min 25% 50% 75% max	estimated_store	_to_consum	196902. 545. 219. 0. 382. 544. 702.		

Missing Values:

- Significant missing values are found in:
- market_id: 987 missing
- store_primary_category: 4760 missing
- order_protocol: 995 missing
- total_onshift_dashers, total_busy_dashers, and total_outstanding_orders: 16,262 missing each
- estimated_store_to_consumer_driving_duration: 526 missing

Descriptive Statistics:

Order-Specific Variables:

- total_items: Ranges from 1 to 411, with an average of ~3.2 items.
- subtotal: Ranges from 0 to 27100, with a mean of ~2682.

• min_item_price and max_item_price: Show outliers, including negative values for min_item_price.

Market-Specific Variables:

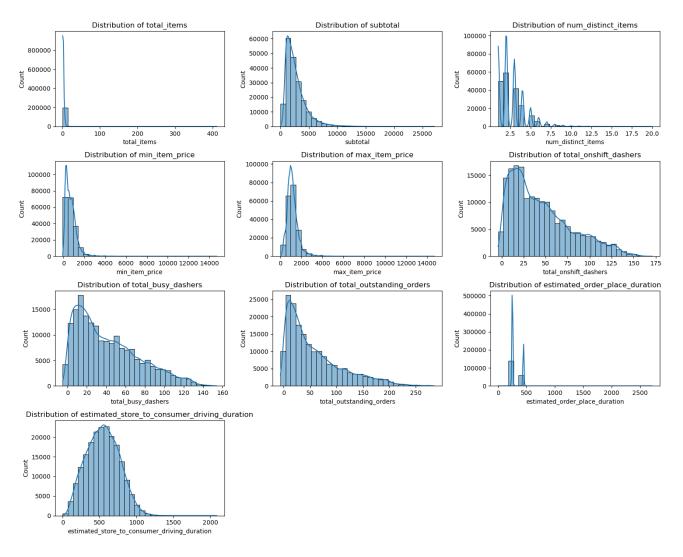
- total_onshift_dashers: Average of ~44.8 dashers, with some negative values.
- total_busy_dashers: Average of ~41.7 busy dashers, also includes negative values.
- total_outstanding_orders: Average of ~58 outstanding orders, with some negative values.

Time-Based Variables:

- estimated_order_place_duration: Average of ~308.6 seconds.
- estimated_store_to_consumer_driving_duration: Average of ~545.4 seconds.

1.1. Distribution Plots and Analysis

```
In [25]: plt.figure(figsize=(15, 12))
    for i, feature in enumerate(features_of_interest, 1):
        plt.subplot(4, 3, i)
        sns.histplot(data[feature], bins=30, kde=True)
        plt.title(f'Distribution of {feature}')
    plt.tight_layout()
    plt.show()
```



Order-Specific Features:

- total_items: The distribution is right-skewed, indicating that most orders contain a small number of items, with a few larger orders skewing the distribution.
- subtotal: This feature is also right-skewed, showing that most orders have relatively low subtotals, while a few high-value orders result in a long tail.
- min_item_price and max_item_price: Both show wide ranges with potential outliers.
 Notably, min_item_price has negative values, which are likely data entry errors and should be addressed in data cleaning.

Market-Specific Features:

- total_onshift_dashers and total_busy_dashers: Both features have a broad distribution, reflecting variation in dasher availability and workload at different times.
 Negative values suggest data inaccuracies, possibly from temporary tracking errors.
- total_outstanding_orders: This feature has a right-skewed distribution, indicating that in most cases, there are relatively few outstanding orders nearby, but there are

instances with high local demand.

Time-Based Features:

- estimated_order_place_duration: The distribution is right-skewed, with most orders
 placed quickly but a few taking much longer. This may indicate specific restaurants
 or times when order preparation is slower.
- estimated_store_to_consumer_driving_duration: Right-skewed as well, suggesting
 that most deliveries have shorter driving times, but a few outliers reflect longer
 travel distances, possibly due to location or traffic condition

2. Models

2.1: Ridge Regression Model

```
Out[32]: 0
                    3779.0
          1
                    4024.0
          2
                    1781.0
          3
                    3075.0
                    2390.0
          197423
                    3907.0
          197424
                    3383.0
          197425
                    3008.0
          197426
                    3907.0
          197427
                    2228.0
          Name: delivery_duration, Length: 197421, dtype: float64
```

Without imputing the missing values, we run into errors indicating that there are missing values (NaNs) in the predictor variables, which Ridge Regreission cannot handle directly. Dropping rows with missing values might remove a significant portion of the data so instead we decided to impute the data.

```
In [36]: from sklearn.impute import SimpleImputer
# Impute missing values in predictor features with the median
X = data[predictor_features]
y = data['delivery_duration']
imputer = SimpleImputer(strategy='median')
X_imputed = imputer.fit_transform(X)

X_train, X_test, y_train, y_test = train_test_split(X_imputed, y, test_size=
In [37]: ridge = RidgeCV(alphas=[0.1, 1.0, 10.0, 100.0], scoring='neg_mean_squared_er ridge.fit(X_train, y_train)

y_train_pred = ridge.predict(X_train)
y_test_pred = ridge.predict(X_test)

In [38]: train_mse = mean_squared_error(y_train, y_train_pred)
test_mse = mean_squared_error(y_test, y_test_pred)
ridge_alpha = ridge.alpha_ # Optimal alpha selected by cross-validation
(train_mse, test_mse, ridge_alpha)
```

Out[38]: (460746486.9224764, 4629944.095231325, 100.0)

Results:

Training Mean Squared Error: 460,746,486.92

- Test Mean Squared Error: 4,629,944.11
- Optimal Alpha (Regularization Parameter): 100.0

The test MSE is much lower than the Training MSE suggesting that the model generalizes better on unseen data, because of the regularization of Ridge Regression but the large differences between training and test MSE might indicate that the model is underfitting, meaning it is overly constrained and not fully capturing the relationships in the data.

Wiht the alpha value being 100.0, it means that the model is heavily reguarlized.

These results indicate that the model is fitting reasonably well on the test set, but there could be room for improvement and should be tested with other models such as polynomial regression or neural networks.

In []:

```
import pandas as pd
import numpy as np
import seaborn as sns
import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split, RandomizedSearchCV
from sklearn.pipeline import Pipeline
from sklearn.preprocessing import StandardScaler
from sklearn.neighbors import KNeighborsRegressor
from sklearn.metrics import mean_squared_error
from sklearn.ensemble import RandomForestRegressor
```

Data Cleaning

In [2]:	<pre>df = pd.read_csv('historical_data.csv')</pre>									
In [3]:	df.shape	9								
Out[3]:	(197428	, 16)								
In [4]:	df.head()									
Out[4]:	mark	et_id	created_at	actual_delivery_time	store_id	store_primary_category	ord			
	0	1.0	2015-02- 06 22:24:17	2015-02-06 23:27:16	1845	american				
	1	2.0	2015-02- 10 21:49:25	2015-02-10 22:56:29	5477	mexican				
	2	3.0	2015-01- 22 20:39:28	2015-01-22 21:09:09	5477	NaN				
	3	3.0	2015-02- 03 21:21:45	2015-02-03 22:13:00	5477	NaN				
	4	3.0	2015-02- 15 02:40:36	2015-02-15 03:20:26	5477	NaN				
In [5]:	df.colur	nns								

```
Index(['market_id', 'created_at', 'actual_delivery_time', 'store_id',
                 'store_primary_category', 'order_protocol', 'total_items', 'subtota
         l',
                 'num_distinct_items', 'min_item_price', 'max_item_price',
                 'total_onshift_dashers', 'total_busy_dashers',
                 'total_outstanding_orders', 'estimated_order_place_duration',
                 'estimated_store_to_consumer_driving_duration'],
                dtvpe='object')
In [6]: features = ["store_id", "subtotal", "total_items", "num_distinct_items", "mi
                     "max_item_price", "total_onshift_dashers", "total_busy_dashers",
                     "estimated_order_place_duration", "estimated_store_to_consumer_c
 In [7]: # check null values
         print(df.isnull().sum())
        market id
                                                           987
                                                             0
        created_at
                                                             7
        actual delivery time
        store id
        store_primary_category
                                                          4760
        order_protocol
                                                           995
        total_items
                                                             0
        subtotal
                                                             0
        num_distinct_items
                                                             0
        min item price
                                                             0
        max_item_price
        total_onshift_dashers
                                                         16262
        total_busy_dashers
                                                         16262
        total_outstanding_orders
                                                         16262
        estimated_order_place_duration
                                                             0
        estimated_store_to_consumer_driving_duration
                                                           526
        dtype: int64
In [8]: # clean nan rows
         df = df.dropna(subset=['created_at', 'actual_delivery_time', 'total_onshift_
In [9]: # still reasonable size
         df.shape
Out[9]: (180677, 16)
In [10]: # calculate dependent variable
         df['created at'] = pd.to datetime(df['created at'])
         df['actual_delivery_time'] = pd.to_datetime(df['actual_delivery_time'])
         df['delivery duration'] = (df['actual delivery time'] - df['created at']).dt
```

Baseline Model

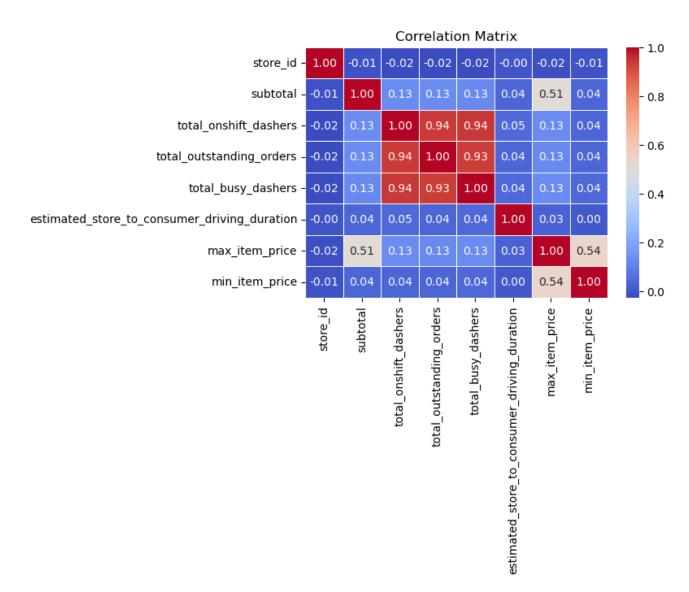
```
In [11]: X = df[features]
         y = df['delivery duration']
         X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, rar
In [12]: | scaler = StandardScaler()
         X train = scaler.fit transform(X train)
         X_test = scaler.transform(X_test)
 In []: # 5 neighbor baseline model before filtering features
         knn = KNeighborsRegressor(n_neighbors=5)
         knn.fit(X train, y train)
 Out[]:
             KNeighborsRegressor
         KNeighborsRegressor()
In [14]: y_pred = knn.predict(X_test)
In [15]: | mse = mean_squared_error(y_test, y_pred)
         rmse = np.sqrt(mse)
         print(f"Mean Squared Error: {mse}")
         print(f"Root Mean Squared Error: {rmse}")
        Mean Squared Error: 8140982.783305292
```

Root Mean Squared Error: 2853.2407510242265

Filter to Important Features

```
In [16]: # checking importance of features for faster hyperparameter tuning.
         # fit a random tree based model
         rf = RandomForestRegressor(n_estimators=100, random_state=42)
         rf.fit(X train, y train)
         # extract feature importances
         importances = rf.feature_importances_
         sorted_idx = np.argsort(-importances)
         for i in sorted idx:
             print(f"Feature {X.columns[i]}: {importances[i]:.4f}")
```

```
Feature estimated_store_to_consumer_driving_duration: 0.1608
        Feature total outstanding orders: 0.1488
        Feature subtotal: 0.1473
        Feature total_onshift_dashers: 0.1207
        Feature store_id: 0.1108
        Feature max item price: 0.0898
        Feature min item price: 0.0855
        Feature total_busy_dashers: 0.0724
        Feature num_distinct_items: 0.0242
        Feature total_items: 0.0236
        Feature estimated_order_place_duration: 0.0162
In [17]: y_pred = knn.predict(X_test)
In [18]: r_mse = mean_squared_error(y_test, y_pred)
         r_rmse = np.sqrt(mse)
         print(f"Random Mean Squared Error: {r_mse}")
         print(f"Random Root Mean Squared Error: {r_rmse}")
        Random Mean Squared Error: 8140982.783305292
        Random Root Mean Squared Error: 2853.2407510242265
In [35]: # new features based on importance.
         new_features = ["store_id", "subtotal", "total_onshift_dashers", "total_outs
                     "estimated_store_to_consumer_driving_duration", "max_item_price"
In [36]: X = df[new features]
         y = df['delivery duration']
         X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, ran
 In [ ]: # correlation matrix
         correlation matrix = X train.corr()
         plt.figure(figsize=(6, 4))
         sns.heatmap(correlation_matrix, annot=True, cmap='coolwarm', fmt=".2f", line
         plt.title('Correlation Matrix')
         plt.show()
```



```
Out[]: KNeighborsRegressor KNeighborsRegressor()
```

```
In [42]: y_pred = knn.predict(X_test)

In [43]: new_mse = mean_squared_error(y_test, y_pred)
    new_rmse = np.sqrt(mse)
    print(f"Baseline Mean Squared Error: {mse}")
    print(f"Baseline Root Mean Squared Error: {rmse}")
    print(f"Filtered Mean Squared Error: {new_mse}")
    print(f"Filtered Root Mean Squared Error: {new_rmse}")

Baseline Mean Squared Error: 8140982.783305292
    Baseline Root Mean Squared Error: 2853.2407510242265
    Filtered Mean Squared Error: 8224760.039044719
    Filtered Root Mean Squared Error: 2853.2407510242265
```

Hyperparameter Tuning

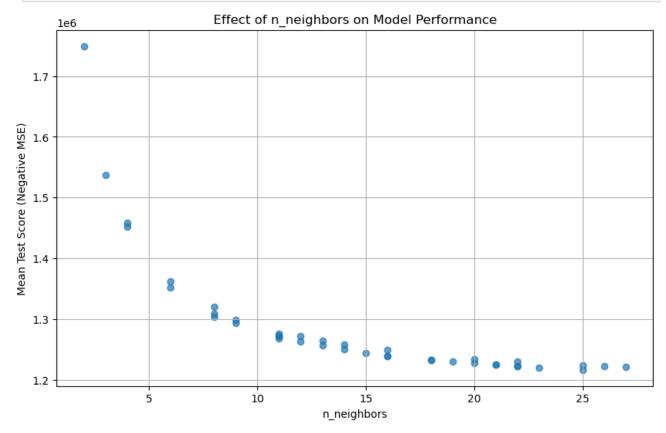
```
In [75]: # pipeline
         pipeline = Pipeline([
             ('scaler', StandardScaler()),
             ('knn', KNeighborsRegressor())
         ])
         # parameter grid
         param_grid = {
              'knn__n_neighbors': range(1, 51),
             'knn_weights': ['uniform', 'distance'],
             'knn__metric': ['euclidean', 'manhattan'],
              'knn__leaf_size': [10, 20, 30, 40, 50]
         }
         # RandomizedSearchCV
          random search = RandomizedSearchCV(
             pipeline,
             param distributions=param grid,
             n_iter=40, # Number of random samples
             scoring='neg_mean_squared_error',
             random_state=24,
             verbose=1
          random_search.fit(X_train, y_train)
```

```
# best parameters and score
print(f"Best Parameters: {random_search.best_params_}")
print(f"Best Score: {-random_search.best_score_:.4f}")
```

Fitting 5 folds for each of 40 candidates, totalling 200 fits
Best Parameters: {'knn_weights': 'uniform', 'knn_n_neighbors': 49, 'knn_m
etric': 'manhattan', 'knn_leaf_size': 30}
Best Score: 1198305.1328

```
In []: # extract results into a DataFrame
    results = pd.DataFrame(random_search.cv_results_)

# plot n_neighbors vs Mean Test Score
    plt.figure(figsize=(10, 6))
    plt.scatter(results['param_knn__n_neighbors'], -results['mean_test_score'],
    plt.xlabel('n_neighbors')
    plt.ylabel('Mean Test Score (Negative MSE)')
    plt.title('Effect of n_neighbors on Model Performance')
    plt.grid()
    plt.show()
```



```
In []: # optimized KNN Regressor
final_model = random_search.best_estimator_
final_model.fit(X_train, y_train)
```

```
y_pred = final_model.predict(X_test)
```

```
In [74]: optimized_mse = mean_squared_error(y_test, y_pred)
    optimized_rmse = np.sqrt(mse)
    print(f"Filtered Mean Squared Error: {new_mse}")
    print(f"Filtered Root Mean Squared Error: {new_rmse}")
    print(f"Tuned Mean Squared Error: {optimized_mse}")
    print(f"Tuned Root Mean Squared Error: {optimized_rmse}")
```

Filtered Mean Squared Error: 8224760.039044719

Filtered Root Mean Squared Error: 2853.2407510242265

Tuned Mean Squared Error: 8047394.471633444

Tuned Root Mean Squared Error: 2853.2407510242265

```
import pandas as pd
import numpy as np
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.neural_network import MLPRegressor
from sklearn.inspection import mean_squared_error
from sklearn.inspection import permutation_importance
from keras.layers import Dense, Activation
from keras.models import Sequential
import tensorflow as tf
from sklearn.model_selection import RandomizedSearchCV
from scikeras.wrappers import KerasRegressor
from keras.callbacks import EarlyStopping
import random
```

Setting up Data

```
In [40]: dash_data = pd.read_csv("/Users/paulgarces/Desktop/INF0371/historical_data.c
dash_data = dash_data.dropna()
dash_data.head(5)

Out[40]: 175777

In [3]: dash_data["created_at"] = pd.to_datetime(dash_data["created_at"])
dash_data["actual_delivery_time"] = pd.to_datetime(dash_data["actual_delivery_dash_data["delivery_duration"] = (dash_data["actual_delivery_time"] - dash_cdata_data_head(5)
```

2015-02-

market_id created_at actual_delivery_time store_id store_primary_category ord

	0	1.0	06 22:24:17	2015-02-06 23:27:1	6 1845	american
	1	2.0	2015-02- 10 21:49:25	2015-02-10 22:56:2	9 5477	mexican
	8	2.0	2015-02- 16 00:11:35	2015-02-16 00:38:0	01 5477	indian
	14	1.0	2015-02- 12 03:36:46	2015-02-12 04:14:3	9 2841	italian
	15	1.0	2015-01- 27 02:12:36	2015-01-27 03:02:2	4 2841	italian
In [4]:	features	"t	otal_onshi	ft_dashers", "tot		m_price", "max_item , "total_outstandir ']
In [5]:	X = dash_ y = dash_	_	[features] ["delivery_	duration"]		
In [6]:	X_train,	X_tes	st, y_train	, y_test = train_	_test_split(X, y,	test_size=0.2, rar
In [7]:			lardScaler(I = scaler.) fit_transform(X_t	rain)	

Neural Network with MLP Regressor

X_test_scaled = scaler.transform(X_test)

I'll probably switch to just using Keras for predictions

Neural Networks with Keras and One Hidden Layer but with Different Hidden Neuron Numbers Based on Different Techniques

I got all the information needed to use Neural Networks from these websites

Out[3]:

https://stackoverflow.com/questions/49008074/how-to-create-a-neural-network-for-regression

https://medium.com/geekculture/introduction-to-neural-network-2f8b8221fbd3#:~:text=Number%20of%20Neurons%20In%20Input,as%20a%20regressor%

https://stackoverflow.com/questions/35050753/how-big-should-batch-size-and-number-of-epochs-be-when-fitting-a-model

https://stats.stackexchange.com/questions/181/how-to-choose-the-number-of-hidden-layers-and-nodes-in-a-feedforward-neural-netw

https://medium.com/@sanjay_dutta/number-of-neurons-per-hidden-layer-in-neural-networks-a-guide-

106fea04fbfe#:~:text=The%20%E2%80%9CStretch%20Pants%E2%80%9D%20Approach,

http://karpathy.github.io/2019/04/25/recipe/

https://www.linkedin.com/pulse/choosing-number-hidden-layers-neurons-neural-networks-sachdev/

Use this formula to keep neurons less than the value to prevent overfitting $Nh = Ns/(\alpha_* (Ni + No))$

Ni = # input neurons/features (11)

No = # of output neurons (1)

Ns = # of samples in training set (140621)

 $\alpha * =$ arbitrary scaling factor usually 2-10 (2)

Setting Seed for Reproducibility

Using 2/3 of Input Layer Plus the Size of the Output Layer

"The number of hidden neurons should be 2/3 the size of the input layer, plus the size of the output layer."

```
In [41]: model_one = Sequential()
   model_one.add(Dense(7, activation = "relu", input_dim = 9))
   model_one.add(Dense(units = 1))
   model_one.compile(optimizer = "adam",loss = "mean_squared_error")
   model_one.fit(X_train_scaled, y_train, batch_size = 32, epochs = 75)
```

```
test_predictions = model_one.predict(X_test_scaled)
test_mse = mean_squared_error(y_test, test_predictions)
test_rmse = np.sqrt(test_mse)
print(f"Test MSE: {test_mse}")
print(f"Test RMSE: {test_rmse}")
```

Epoch 1/75

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8
7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye
r. When using Sequential models, prefer using an `Input(shape)` object as th
e first layer in the model instead.

```
super().__init__(activity_regularizer=activity_regularizer, **kwargs)
4395/4395 -
                            — 3s 655us/step - loss: 13009403.0000
Epoch 2/75
4395/4395 -
                            — 3s 625us/step - loss: 8158336.5000
Epoch 3/75
4395/4395 -
                             — 3s 603us/step - loss: 5378672.0000
Epoch 4/75
4395/4395 -
                              - 3s 610us/step - loss: 4128125.0000
Epoch 5/75
4395/4395 -
                             — 3s 596us/step - loss: 6682765.5000
Epoch 6/75
4395/4395 -
                              - 3s 604us/step - loss: 4098742.7500
Epoch 7/75
4395/4395 -
                              - 3s 628us/step - loss: 3716700.7500
Epoch 8/75
4395/4395 -
                              - 4s 844us/step - loss: 2998083.2500
Epoch 9/75
4395/4395 -
                             - 3s 598us/step - loss: 2592318.7500
Epoch 10/75
4395/4395 -
                             - 3s 620us/step - loss: 3504883.2500
Epoch 11/75
4395/4395 -
                              - 3s 626us/step - loss: 1690799.1250
Epoch 12/75
4395/4395 -
                             - 3s 678us/step - loss: 1786250.1250
Epoch 13/75
4395/4395 -
                              - 3s 654us/step - loss: 2415238.5000
Epoch 14/75
4395/4395 -
                              - 3s 632us/step - loss: 1492449.6250
Epoch 15/75
4395/4395 -
                              - 3s 641us/step - loss: 1924434.2500
Epoch 16/75
4395/4395 -
                              - 4s 891us/step - loss: 4034803.2500
Epoch 17/75
4395/4395 -
                              - 3s 715us/step - loss: 2132760.7500
Epoch 18/75
4395/4395 -
                             - 3s 698us/step - loss: 1628570.0000
Epoch 19/75
4395/4395 -
                           3s 639us/step - loss: 1504086.3750
```

Epoch 20/75

4395/4395 ————————————————————————————————————	- 3s 566us/step - loss: 2883308.7500
Epoch 21/75	2- 576/
4395/4395 — Epoch 22/75	- 3s 576us/step - loss: 2242942.5000
	- 3s 590us/step - loss: 1600527.8750
Epoch 23/75	
	3s 590us/step - loss: 3213450.0000
Epoch 24/75	
	- 3s 610us/step - loss: 5155803.5000
Epoch 25/75	- 3s 580us/step - loss: 2793077.0000
Epoch 26/75	33 300d3/Step - toss. 2/930//10000
	3s 583us/step - loss: 1520359.1250
Epoch 27/75	
4395/4395	3s 574us/step - loss: 3340240.2500
Epoch 28/75	
	- 3s 597us/step - loss: 1506446.1250
Epoch 29/75	- 3s 607us/step - loss: 2045877.3750
Epoch 30/75	35 00/us/step - toss: 20430//.3/30
	3s 580us/step - loss: 3501916.7500
Epoch 31/75	
4395/4395	3s 583us/step - loss: 2304366.7500
Epoch 32/75	
	- 2s 554us/step - loss: 3043738.7500
Epoch 33/75	• 2s 554us/step - loss: 2358941.2500
Epoch 34/75	25 334us/step - toss. 2336941.2300
	2s 552us/step - loss: 3349043.0000
Epoch 35/75	•
4395/4395 ————————	• 2s 562us/step - loss: 1551337.6250
Epoch 36/75	
	- 2s 547us/step - loss: 2863824.0000
Epoch 37/75 4395/4395	• 2s 553us/step - loss: 1534814.1250
Epoch 38/75	23 33303, 3 ccp
	2s 552us/step - loss: 2467105.2500
Epoch 39/75	
	• 2s 549us/step - loss: 3040300.0000
Epoch 40/75	3- FF4/atan lasar 2227FC0 2F00
4395/4395 ————————————————————————————————————	- 2s 554us/step - loss: 3337569.2500
	- 2s 550us/step - loss: 2623516.5000
Epoch 42/75	25 33003, 3 tep 10331 202331013000
	2s 558us/step - loss: 1438151.0000
Epoch 43/75	
	• 2s 557us/step - loss: 2487219.2500
Epoch 44/75	2 544 / 1 2 2422245 2222
	- 2s 544us/step - loss: 2439945.0000
Epoch 45/75	

	2s 546us/step - loss: 2748136.0000
Epoch 46/75 4395/4395	2s 542us/step - loss: 1801601.6250
Epoch 47/75	
4395/4395 — Epoch 48/75	2s 548us/step - loss: 2483149.2500
	2s 554us/step - loss: 3380413.5000
Epoch 49/75	·
	2s 564us/step - loss: 2253982.7500
Epoch 50/75	3s 612us/step - loss: 3409635.2500
Epoch 51/75	35 012us/step - toss. 3409033.2300
	3s 741us/step - loss: 2182884.2500
Epoch 52/75	·
	3s 613us/step - loss: 1670647.8750
Epoch 53/75	3s 613us/step - loss: 2066607.7500
Epoch 54/75	33 01303/31ep - 1033. 2000007.7300
4395/4395	3s 609us/step - loss: 2475038.2500
Epoch 55/75	
	3s 617us/step - loss: 4558482.5000
Epoch 56/75	3s 648us/step - loss: 3380272.2500
Epoch 57/75	35 04005/51ep - 1055. 33002/2.2300
	3s 612us/step - loss: 2894005.7500
Epoch 58/75	
	3s 602us/step - loss: 1958811.5000
Epoch 59/75	3s 680us/step - loss: 1426822.8750
Epoch 60/75	35 00005/Step - 1055. 1420022:0750
	3s 779us/step - loss: 2664439.7500
Epoch 61/75	
	3s 660us/step - loss: 1994805.6250
Epoch 62/75	3s 699us/step - loss: 3749369.0000
Epoch 63/75	33 03303/31Cp - 1033: 3/43303:0000
	3s 633us/step - loss: 1226984.3750
Epoch 64/75	
	3s 598us/step - loss: 3997181.7500
Epoch 65/75	3s 688us/step - loss: 3029436.7500
Epoch 66/75	33 00003/31ep - 1033. 3029430.7300
	3s 689us/step - loss: 1713875.7500
Epoch 67/75	
	3s 596us/step - loss: 3813270.2500
Epoch 68/75	3s 602us/step - loss: 2889740.2500
Epoch 69/75	33 00203/31Cp - 1033. 2003/40.2300
	3s 596us/step - loss: 2483521.5000
Epoch 70/75	·

```
4395/4395 -
                         3s 715us/step - loss: 2051815.2500
Epoch 71/75
4395/4395 -
                         ---- 3s 615us/step - loss: 1890067.1250
Epoch 72/75
                         3s 624us/step - loss: 3663944.0000
4395/4395 -
Epoch 73/75
4395/4395 -
                        3s 596us/step - loss: 2342884.5000
Epoch 74/75
4395/4395 -
                     3s 594us/step - loss: 2068141.3750
Epoch 75/75
           3s 605us/step - loss: 1045809.1250
1s 582us/step
4395/4395 —
1099/1099 ----
Test MSE: 1067306.1112056961
Test RMSE: 1033.1050823636945
```

Using the Mean of the Input and Output Layer as Number of Neurons

"Most of the problems can be solved by using a single hidden layer with the number of neurons equal to the mean of the input and output layer."

```
In [42]: model_v2 = Sequential()
model_v2.add(Dense(5, activation = "relu", input_dim = 9))
model_v2.add(Dense(units = 1))
model_v2.compile(optimizer = "adam", loss = "mean_squared_error")
model_v2.fit(X_train_scaled, y_train, batch_size = 32, epochs = 75)
v2_pred = model_v2.predict(X_test_scaled)
v2_test_mse = mean_squared_error(y_test, v2_pred)
v2_test_rmse = np.sqrt(v2_test_mse)
print(f"Test MSE: {v2_test_mse}")
print(f"Test RMSE: {v2_test_rmse}")
```

Epoch 1/75

```
/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8
7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye
r. When using Sequential models, prefer using an `Input(shape)` object as th
e first layer in the model instead.
 super().__init__(activity_regularizer=activity_regularizer, **kwargs)
4395/4395 -
                 3s 604us/step - loss: 10278400.0000
Epoch 2/75
                         3s 605us/step - loss: 8338345.5000
4395/4395 -
Epoch 3/75
4395/4395 -
                      3s 569us/step - loss: 5871122.5000
Epoch 4/75
4395/4395 -
                        3s 605us/step - loss: 6928893.0000
Epoch 5/75
4395/4395 -
                     3s 590us/step - loss: 2944301.7500
Epoch 6/75
4395/4395 -
                    3s 594us/step - loss: 2703391.0000
Epoch 7/75
```

	3s 602us/step - loss: 1797775.1250
Epoch 8/75	3- F0F/
Epoch 9/75	3s 585us/step - loss: 2762543.0000
4305 /4305	3s 572us/step - loss: 3004436.0000
Epoch 10/75	33 372d3/3tcp to33. 3004430:0000
	3s 603us/step - loss: 2782365.0000
Epoch 11/75	
4395/4395 ———————	3s 578us/step - loss: 2502843.7500
Epoch 12/75	
	3s 615us/step - loss: 2721266.2500
Epoch 13/75	
	3s 617us/step - loss: 3210873.0000
Epoch 14/75	3s 622us/step - loss: 3193452.7500
Epoch 15/75	35 022us/step = toss. 3193432.7300
•	3s 591us/step - loss: 2981026.5000
Epoch 16/75	20 33143, 316p 1033. 230102013000
4395/4395 —————	3s 631us/step - loss: 1626692.3750
Epoch 17/75	
	3s 723us/step - loss: 3417169.7500
Epoch 18/75	
	3s 679us/step - loss: 4346777.5000
Epoch 19/75	3- 500/ 1 2507020 0000
Epoch 20/75	3s 590us/step - loss: 2507838.0000
4395/4395 ————————————————————————————————————	3s 619us/step - loss: 3077518.0000
Epoch 21/75	33 01303/3 CCp
	3s 597us/step - loss: 2809564.5000
Epoch 22/75	
	3s 697us/step - loss: 1888700.0000
Epoch 23/75	
	3s 622us/step - loss: 2607355.2500
Epoch 24/75	3s 594us/step - loss: 2595038.2500
Epoch 25/75	35 394us/step - toss: 2393038.2300
	3s 625us/step - loss: 2942881.7500
Epoch 26/75	33 02343, 3 tep 10331 23 1200117300
	3s 581us/step - loss: 1219539.6250
Epoch 27/75	
	3s 595us/step - loss: 1908312.5000
Epoch 28/75	
	3s 632us/step - loss: 2618046.0000
Epoch 29/75	2c F07uc/cton local 2700244 2500
4395/4395 — Epoch 30/75	3s 587us/step - loss: 3708344.2500
	3s 629us/step - loss: 1924009.8750
Epoch 31/75	55 52543, 5 ccp
	3s 630us/step - loss: 1938751.3750
Epoch 32/75	

4395/4395 —————	3s 607us/step - loss: 2173796.2500
Epoch 33/75	
	3s 621us/step - loss: 1773329.3750
Epoch 34/75	3s 689us/step - loss: 2141259.7500
Epoch 35/75	33 00903/31ep - 1033. 21412391/300
	3s 644us/step - loss: 3091262.2500
Epoch 36/75	33.33,333,
4395/4395 —————	3s 587us/step - loss: 5514769.5000
Epoch 37/75	
	3s 634us/step - loss: 5460966.0000
Epoch 38/75	•
	3s 589us/step - loss: 2165075.5000
Epoch 39/75	3s 600us/step - loss: 2253504.2500
Epoch 40/75	35 00003/31ep - 1033. 2233304.2300
• ·	3s 596us/step - loss: 4082992.0000
Epoch 41/75	
4395/4395 —————	3s 611us/step - loss: 2604139.5000
Epoch 42/75	
	2s 556us/step - loss: 6800908.5000
Epoch 43/75	• /
	2s 555us/step - loss: 2392483.2500
Epoch 44/75	3s 611us/step - loss: 3021450.0000
Epoch 45/75	35 011us/step - toss: 3021430.0000
4395/4395	3s 598us/step - loss: 3049805.0000
Epoch 46/75	25 33043, 3104
	3s 624us/step - loss: 2686599.2500
Epoch 47/75	·
	3s 576us/step - loss: 4048489.7500
Epoch 48/75	
	3s 592us/step - loss: 6396558.5000
Epoch 49/75	4s 879us/step - loss: 2685960.5000
Epoch 50/75	45 8/905/5tep - toss. 2085/900.5000
• ·	3s 644us/step - loss: 2734221.7500
Epoch 51/75	20 0 1 1 20 0 20 0 20 0 20 0 20 0 20 0
	3s 624us/step - loss: 3056695.7500
Epoch 52/75	
	3s 635us/step - loss: 1432735.7500
Epoch 53/75	
	3s 712us/step - loss: 3200408.7500
Epoch 54/75	3s 621us/step - loss: 3916997.0000
Epoch 55/75	33 02103/31ch - 1022. 331033/10000
	3s 601us/step - loss: 4407239.0000
Epoch 56/75	11 71 117 117 117 117 117 117 117 117 1
	3s 588us/step - loss: 2751301.2500
Epoch 57/75	

4395/4395	3s	601us/step -	_	loss:	1889091.3750
Epoch 58/75					
4395/4395 ——————	2s	562us/step -	-	loss:	3188739.0000
Epoch 59/75					
4395/4395	2s	559us/step -	-	loss:	1433136.2500
Epoch 60/75					
4395/4395 ———————	3s	566us/step -	-	loss:	3014108.2500
Epoch 61/75					
4395/4395 —————	2s	559us/step -	-	loss:	4441591.5000
Epoch 62/75		•			
4395/4395 —————	3s	594us/step -	_	loss:	3001758.2500
Epoch 63/75		•			
4395/4395 —————	3s	592us/step -	_	loss:	2097501.2500
Epoch 64/75		•			
4395/4395 —————	3s	621us/step -	_	loss:	2318169.0000
Epoch 65/75		•			
4395/4395 —————	3s	619us/step -	_	loss:	1593614.6250
Epoch 66/75		•			
4395/4395 —————	3s	582us/step -	_	loss:	1705285.7500
Epoch 67/75		•			
4395/4395 —————	3s	640us/step -	_	loss:	1199484.2500
Epoch 68/75		•			
4395/4395 —————	3s	672us/step -	_	loss:	3183184.5000
Epoch 69/75		•			
4395/4395 —————	3s	644us/step -	_	loss:	5231866.0000
Epoch 70/75					
4395/4395 —————	3s	611us/step -	-	loss:	6349252.0000
Epoch 71/75					
4395/4395 ——————	3s	604us/step -	_	loss:	2607157.7500
Epoch 72/75					
4395/4395 ————————	3s	603us/step -	-	loss:	3448783.0000
Epoch 73/75					
4395/4395 ———————	3s	609us/step -	-	loss:	1381375.1250
Epoch 74/75					
4395/4395 ———————	3s	608us/step -	-	loss:	3391993.5000
Epoch 75/75					
4395/4395	3s	615us/step -	-	loss:	1325286.1250
1099/1099 ——————	1 s	588us/step			
Test MSE: 1077688.1033897095					
Test RMSF: 1038,1175768619416					

Test RMSE: 1038.1175768619416

Using the Square Root of the Input Layer Nodes * Output Layer Nodes

"The most appropriate number of hidden neurons is sqrt(input layer nodes * output layer nodes)."

```
In [39]: model_v3 = Sequential()
         model_v3.add(Dense(3, activation = "relu", input_dim = 9))
         model_v3.add(Dense(units = 1))
```

```
model_v3.compile(optimizer = "adam", loss = "mean_squared_error")
model_v3.fit(X_train_scaled, y_train, batch_size = 32, epochs = 75)
v3_pred = model_v3.predict(X_test_scaled)
v3_test_mse = mean_squared_error(y_test, v3_pred)
v3_test_rmse = np.sqrt(v3_test_mse)
print(f"Test MSE: {v3_test_mse}")
print(f"Test RMSE: {v3_test_rmse}")
```

Epoch 1/75

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

```
super(). init (activity regularizer=activity regularizer, **kwarqs)
                  3s 562us/step - loss: 10855163.0000
4395/4395 -
Epoch 2/75
4395/4395 -
                        ---- 3s 573us/step - loss: 10197053.0000
Epoch 3/75
4395/4395 -
                           - 2s 554us/step - loss: 9263774.0000
Epoch 4/75
4395/4395 -
                        3s 637us/step - loss: 6350989.5000
Epoch 5/75
4395/4395 -
                         4s 797us/step - loss: 9383126.0000
Epoch 6/75
4395/4395 -
                          ___ 2s 557us/step - loss: 5203717.0000
Epoch 7/75
4395/4395 -
                         3s 565us/step - loss: 4755715.0000
Epoch 8/75
                         2s 563us/step - loss: 4087446.0000
4395/4395 -
Epoch 9/75
4395/4395 -
                        ----- 3s 570us/step - loss: 4564910.5000
Epoch 10/75
4395/4395 -
                          --- 3s 572us/step - loss: 4840041.0000
Epoch 11/75
4395/4395 -
                        2s 563us/step - loss: 3402608.2500
Epoch 12/75
4395/4395 -
                        3s 573us/step - loss: 2077507.7500
Epoch 13/75
4395/4395 -
                           — 3s 589us/step - loss: 3823624.0000
Epoch 14/75
4395/4395 -
                          3s 579us/step - loss: 3098327.2500
Epoch 15/75
4395/4395 -
                         3s 581us/step - loss: 2105729.0000
Epoch 16/75
4395/4395 -
                          — 3s 575us/step - loss: 1628803.6250
Epoch 17/75
4395/4395 -
                        3s 570us/step - loss: 5122567.5000
Epoch 18/75
4395/4395 -
                      3s 650us/step - loss: 2514744.2500
Epoch 19/75
```

	3s 603us/step - loss: 1301075.1250
Epoch 20/75	3s 704us/step - loss: 2013264.0000
Epoch 21/75	33 /0403/Step - t033. 2013204.0000
4395/4395	3s 630us/step - loss: 3318893.5000
Epoch 22/75	, , , , , , , , , , , , , , , , , , ,
	3s 665us/step - loss: 2049276.1250
Epoch 23/75	
	3s 630us/step - loss: 1376730.7500
Epoch 24/75	/
	3s 592us/step - loss: 2391448.5000
Epoch 25/75	3s 570us/step - loss: 1489399.3750
Epoch 26/75	35 370us/step - toss: 1409399.3730
	3s 576us/step - loss: 2106410.2500
Epoch 27/75	20 0.000, 0.00p
4395/4395 ————	3s 569us/step - loss: 4043278.7500
Epoch 28/75	
	4s 819us/step - loss: 2065851.0000
Epoch 29/75	
	4s 922us/step - loss: 2103643.2500
Epoch 30/75	3s 645us/step - loss: 2331079.2500
Epoch 31/75	35 043us/step - toss: 23310/9.2300
	2s 560us/step - loss: 2192036.2500
Epoch 32/75	25 30003, 3100
4395/4395 ————	3s 588us/step - loss: 3152337.5000
Epoch 33/75	·
	3s 640us/step - loss: 1659923.6250
Epoch 34/75	
	3s 654us/step - loss: 2446893.0000
Epoch 35/75	3c 642us/ston loss, 2000720 2500
4395/4395 — Epoch 36/75	- 3s 642us/step - loss: 2888739.2500
	3s 683us/step - loss: 4069081.7500
Epoch 37/75	10000117500
· ·	3s 708us/step - loss: 2790872.2500
Epoch 38/75	
	3s 660us/step - loss: 3649832.2500
Epoch 39/75	/
	2s 557us/step - loss: 2809657.2500
Epoch 40/75	3s 624us/step - loss: 2659858.0000
Epoch 41/75	35 024us/step - toss: 2039636.0000
	3s 637us/step - loss: 3245409.2500
Epoch 42/75	22.22, 22.5
	3s 591us/step - loss: 2060003.1250
Epoch 43/75	
	3s 585us/step - loss: 3158206.5000
Epoch 44/75	

4395/4395 —————	3s	683us/step	_	loss:	1439143.6250
Epoch 45/75					
4395/4395 ——————	3s	621us/step	-	loss:	3996540.0000
Epoch 46/75	_	674		,	2560045 5000
4395/4395 ————————————————————————————————————	35	6/4us/step	_	loss:	2569045.5000
4395/4395 ————	35	708us/sten	_	lossi	3099624_0000
Epoch 48/75		, 00u3, 3 ccp		.0551	303302110000
4395/4395 —————	3s	644us/step	_	loss:	4022408.2500
Epoch 49/75					
4395/4395	3s	598us/step	-	loss:	3144300.5000
Epoch 50/75	2-	E02 /a+an		1	1072257 2500
4395/4395 — Epoch 51/75	35	583us/step	_	loss:	18/335/.2500
4395/4395 ————	3s	583us/step	_	loss:	2920346.0000
Epoch 52/75		эээлэ, этэр			
4395/4395 ————————	3s	619us/step	-	loss:	9583587.0000
Epoch 53/75					
4395/4395 ————	3s	665us/step	-	loss:	2943725.2500
Epoch 54/75 4395/4395	20	72/115/5+00		10001	1010041 7500
Epoch 55/75	25	724us/step	_	10551	1019941.7500
4395/4395	3s	649us/step	_	loss:	1945996.0000
Epoch 56/75					
4395/4395 ———————	3s	669us/step	-	loss:	2240906.5000
Epoch 57/75	_			_	
4395/4395	3s	599us/step	-	loss:	3334249.0000
Epoch 58/75 4395/4395	3.	630us /sten		10001	2773904 7500
Epoch 59/75	23	030us/step	_	1055.	277309417300
4395/4395	3s	587us/step	_	loss:	2820419.2500
Epoch 60/75		·			
	3s	769us/step	-	loss:	4060488.2500
Epoch 61/75	2-	606		1	2556177 7500
4395/4395 — Epoch 62/75	35	owous/step	_	toss:	25501//./500
4395/4395 ————	3s	587us/step	_	loss:	3201272.2500
Epoch 63/75		от то, о тор			
4395/4395 ————————	3s	593us/step	-	loss:	4303455.5000
Epoch 64/75	_			_	
4395/4395 ————————————————————————————————————	3s	602us/step	-	loss:	4146976.2500
Epoch 65/75 4395/4395	3.	590us/sten		10001	2020037 9750
Epoch 66/75	23	309us/step	_	1055.	2029037:0730
4395/4395	3s	586us/step	_	loss:	1395941.3750
Epoch 67/75					
4395/4395 ——————	3s	598us/step	-	loss:	2787763.2500
Epoch 68/75	_	F04 / :		,	4534050 0755
4395/4395 ————————————————————————————————————	3s	591us/step	-	loss:	1521850.8750
Epoch 69/75					

```
3s 598us/step - loss: 4081412.2500
4395/4395 -
Epoch 70/75
4395/4395 -
                          ---- 3s 589us/step - loss: 4000773.7500
Epoch 71/75
4395/4395 -
                           — 3s 588us/step - loss: 1396735.2500
Epoch 72/75
4395/4395 -
                         ---- 3s 578us/step - loss: 1374878.2500
Epoch 73/75
4395/4395 -
                          ---- 3s 590us/step - loss: 1804198.8750
Epoch 74/75
4395/4395 -
                         3s 584us/step - loss: 7379534.5000
Epoch 75/75
4395/4395 -
                             - 3s 588us/step - loss: 2637110.5000
                          1s 570us/step
1099/1099 ---
Test MSE: 1081025,2935118293
Test RMSE: 1039.7236620909564
```

Training Neural Networks w/ Multiple Layers

```
In [28]: def create_keras_model(neurons_per_layer=[32], activation = "relu"):
             model = Sequential()
             model.add(Dense(neurons_per_layer[0], activation="relu", input_dim=9))
             for neurons in neurons_per_layer[1:]:
                 model.add(Dense(neurons, activation="relu"))
             model.add(Dense(1))
             model.compile(optimizer="adam", loss="mean_squared_error")
             return model
         keras_model = KerasRegressor(build_fn=create_keras_model, verbose=1)
         param_dist = {"model__neurons_per_layer": [[3], [5], [7], [32], [64], [128],
                                              [32, 16], [32, 16, 8], [128, 64, 32], [6
                       "epochs": [50, 75, 100]}
         random_search = RandomizedSearchCV(estimator=keras_model, param_distributior
                                             random_state=371)
         random_search.fit(X_train_scaled, y_train)
         best_params = random_search.best_params_
         print("Best Parameters:", best_params)
         print("Optimal Neurons Per Layer:", best_params["model__neurons_per_layer"])
         print("Best Negative MSE (CV):", random_search.best_score_)
         best_keras_model = random_search.best_estimator_
         test_predictions_keras = best_keras_model.predict(X_test_scaled)
         test_mse_keras = mean_squared_error(y_test, test_predictions_keras)
         test_rmse_keras = np.sqrt(test_mse_keras)
```

```
print(f"Keras Test MSE: {test_mse_keras}")
print(f"Keras Test RMSE: {test_rmse_keras}")
```

Epoch 1/50

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2930/2930 -
                  3s 774us/step - loss: 7980223.5000
Epoch 2/50
2930/2930 -
                          2s 696us/step - loss: 4260334.5000
Epoch 3/50
2930/2930 -
                             - 2s 734us/step - loss: 3540446.0000
Epoch 4/50
2930/2930 -
                           — 2s 732us/step - loss: 4229158.5000
Epoch 5/50
2930/2930 -
                           2s 775us/step - loss: 3470074.7500
Epoch 6/50
2930/2930 -
                             - 2s 719us/step - loss: 2869067.0000
Epoch 7/50
2930/2930 -
                            - 2s 758us/step - loss: 4951017.0000
Epoch 8/50
2930/2930 -
                            — 2s 694us/step - loss: 4971205.0000
Epoch 9/50
2930/2930 -
                          2s 761us/step - loss: 1452427.3750
Epoch 10/50
2930/2930 -
                             - 2s 774us/step - loss: 3944863.5000
Epoch 11/50
2930/2930 -
                            — 2s 786us/step - loss: 7514665.5000
Epoch 12/50
                          2s 797us/step - loss: 6404178.0000
2930/2930 -
Epoch 13/50
2930/2930 -
                             - 2s 807us/step - loss: 9486952.0000
Epoch 14/50
2930/2930 -
                             - 2s 812us/step - loss: 2365709.7500
Epoch 15/50
2930/2930 -
                            — 2s 818us/step - loss: 2210940.5000
Epoch 16/50
2930/2930 -
                            — 2s 821us/step - loss: 1930446.1250
Epoch 17/50
2930/2930 -
                          2s 832us/step - loss: 12961006.0000
Epoch 18/50
2930/2930 -
                        ----- 3s 881us/step - loss: 2898858.2500
Epoch 19/50
```

Epoch 20/50 2930/2930		2s 832us/step - loss: 4866449.0000
Epoch 21/50 2930/2930		2- 042/
2930/2930 3s 1ms/step loss: 2067834.5000		2\$ 843us/step - loss: 2611/81.5000
Epoch 22/50 2930/2930		3s 1ms/sten - loss: 2067834 5000
2930/2930		33 1m3/3ccp (033: 200/034:3000
Epoch 23/50 2930/2930		3s 908us/step - loss: 1579812.1250
Epoch 24/50 2930/2930		
2930/2930	2930/2930 ——————	3s 964us/step - loss: 2577363.0000
Epoch 25/50 2930/2930		
2930/2930		3s 1ms/step - loss: 3284205.7500
Epoch 26/50 2930/2930		3 042 / 1 2400220 7500
3s 929us/step - loss: 6186657.0000		3s 913us/step - loss: 2190220./500
Epoch 27/50 2930/2930		3c 020us/sten = loss: 6186657 0000
2930/2930		33 929u3/3tep - to33: 010003/10000
Epoch 28/50 2930/2930	•	3s 910us/step - loss: 2885393.0000
Epoch 29/50 2930/2930	Epoch 28/50	
3s 977us/step - loss: 3087900.7500	2930/2930 —————	3s 1ms/step - loss: 3407774.2500
Epoch 30/50 2930/2930	Epoch 29/50	
3s 905us/step - loss: 3488673.2500		3s 977us/step - loss: 3087900.7500
Epoch 31/50 2930/2930 — 3s 996us/step - loss: 6963848.5000 Epoch 32/50 2930/2930 — 2s 788us/step - loss: 3249154.7500 Epoch 33/50 2930/2930 — 3s 862us/step - loss: 2908132.5000 Epoch 34/50 2930/2930 — 2s 811us/step - loss: 2294714.0000 Epoch 35/50 2930/2930 — 2s 751us/step - loss: 3502716.7500 Epoch 36/50 2930/2930 — 2s 790us/step - loss: 1905532.8750 Epoch 37/50 2930/2930 — 2s 771us/step - loss: 2982210.2500 Epoch 38/50 2930/2930 — 2s 758us/step - loss: 1465025.2500 Epoch 39/50 2930/2930 — 2s 763us/step - loss: 3299881.7500 Epoch 40/50 2930/2930 — 2s 759us/step - loss: 3666575.0000 Epoch 41/50 2930/2930 — 2s 758us/step - loss: 3666575.0000 Epoch 42/50 2930/2930 — 2s 770us/step - loss: 5596196.0000 Epoch 43/50 2930/2930 — 2s 770us/step - loss: 5596196.0000 Epoch 43/50 2930/2930 — 3s 889us/step - loss: 3449625.5000	Epoch 30/50	3- 005/
2930/2930		3s 905us/step - loss: 34886/3.2500
Epoch 32/50 2930/2930		3c 006us/step = loss: 6063949 5000
2930/2930		35 99005/51ep - 1055. 0903040.3000
Epoch 33/50 2930/2930	2930/2930 ————	2s 788us/step - loss: 3249154.7500
Epoch 34/50 2930/2930		
2s 811us/step - loss: 2294714.0000 Epoch 35/50 2930/2930	2930/2930 ——————	3s 862us/step - loss: 2908132.5000
Epoch 35/50 2930/2930		
25 751us/step - loss: 3502716.7500 Epoch 36/50 2930/2930		2s 811us/step - loss: 2294714.0000
Epoch 36/50 2930/2930 — 2s 790us/step - loss: 1905532.8750 Epoch 37/50 2930/2930 — 2s 771us/step - loss: 2982210.2500 Epoch 38/50 2930/2930 — 2s 758us/step - loss: 1465025.2500 Epoch 39/50 2930/2930 — 2s 763us/step - loss: 3299881.7500 Epoch 40/50 2930/2930 — 2s 759us/step - loss: 3666575.0000 Epoch 41/50 2930/2930 — 2s 758us/step - loss: 3656017.7500 Epoch 42/50 2930/2930 — 2s 770us/step - loss: 5596196.0000 Epoch 43/50 2930/2930 — 3s 889us/step - loss: 3449625.5000		3- 751/atan lana 2502716 7500
2s 790us/step - loss: 1905532.8750 Epoch 37/50 2930/2930		25 /51us/step - toss: 3502/10./500
Epoch 37/50 2930/2930		2s 790us/sten - loss: 1905532.8750
2930/2930		25 /3043/310p 10331 130333210/30
Epoch 38/50 2930/2930		2s 771us/step - loss: 2982210.2500
Epoch 39/50 2930/2930	Epoch 38/50	·
2930/2930		2s 758us/step - loss: 1465025.2500
Epoch 40/50 2930/2930	•	
2930/2930		2s 763us/step – loss: 3299881.7500
Epoch 41/50 2930/2930	•	2c 750us/stop loss, 2666575 0000
2930/2930 2s 758us/step - loss: 2656017.7500 Epoch 42/50 2930/2930 2s 770us/step - loss: 5596196.0000 Epoch 43/50 2930/2930 3s 889us/step - loss: 3449625.5000		25 /Janz/2reh - rozz: 30002/2.0000
Epoch 42/50 2930/2930 —		2s 758us/step - loss: 2656017.7500
2930/2930 — 2s 770us/step - loss: 5596196.0000 Epoch 43/50 2930/2930 — 3s 889us/step - loss: 3449625.5000		
Epoch 43/50 2930/2930 — 3s 889us/step - loss: 3449625.5000		2s 770us/step - loss: 5596196.0000
	Epoch 43/50	
Epoch 44/50		3s 889us/step - loss: 3449625.5000
	Epoch 44/50	

```
— 3s 928us/step - loss: 4797082.0000
2930/2930 -
Epoch 45/50
2930/2930 -
                          2s 717us/step - loss: 3570474.7500
Epoch 46/50
2930/2930 -
                             - 2s 631us/step - loss: 6043419.5000
Epoch 47/50
2930/2930 -
                           — 2s 622us/step - loss: 1586524.8750
Epoch 48/50
2930/2930 -
                           — 2s 635us/step - loss: 3069491.0000
Epoch 49/50
                           2s 781us/step - loss: 2443214.7500
2930/2930 -
Epoch 50/50
2930/2930 -
                             - 2s 795us/step - loss: 4716737.5000
1465/1465 -
                           1s 630us/step
Epoch 1/50
```

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X, $y = self._initialize(X, y)$

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2930/2930 -
                      3s 708us/step - loss: 4811833.0000
Epoch 2/50
2930/2930 -
                           — 2s 715us/step - loss: 1066047.6250
Epoch 3/50
2930/2930 -
                           — 2s 689us/step - loss: 1053453.0000
Epoch 4/50
2930/2930 -
                            - 2s 697us/step - loss: 1019609.9375
Epoch 5/50
2930/2930 -
                            - 2s 703us/step - loss: 1063101.7500
Epoch 6/50
2930/2930 -
                         2s 759us/step - loss: 1096781.8750
Epoch 7/50
2930/2930 -
                           2s 689us/step - loss: 1231921.2500
Epoch 8/50
2930/2930 -
                            - 2s 651us/step - loss: 1043527.2500
Epoch 9/50
2930/2930 -
                         2s 659us/step - loss: 1087914.8750
Epoch 10/50
2930/2930 -
                            - 2s 627us/step - loss: 1035184.5625
Epoch 11/50
2930/2930 -
                           — 2s 623us/step - loss: 1047397.5625
Epoch 12/50
                             - 2s 620us/step - loss: 1068326.0000
2930/2930 -
Epoch 13/50
2930/2930 -
                         2s 636us/step - loss: 1016834.6250
Epoch 14/50
```

2930/2930 ————————————————————————————————————	2s	656us/step	-	loss:	1045314.2500
Epoch 15/50 2930/2930 ————————————————————————————————————	2s	638us/step	_	loss:	1134796.8750
Epoch 16/50				_	
2930/2930 ————	2s	627us/step	_	loss:	979449.2500
Epoch 17/50	2 -	621		1	1044044 0750
2930/2930 — Epoch 18/50	25	621us/step	_	loss:	1044044.8750
2930/2930 ————	25	633us/sten	_	1055	1021238 8125
Epoch 19/50	23	05543/5100			102125010125
2930/2930 ————	2s	669us/step	_	loss:	1087587.0000
Epoch 20/50		· · · · · · · · · · · · · · · · · · ·			
2930/2930 ——————	2s	711us/step	_	loss:	1017411.1875
Epoch 21/50					
2930/2930 —————	2s	664us/step	-	loss:	1000553.3125
Epoch 22/50	_	670 / 1		,	4020447 0275
2930/2930 ————————————————————————————————————	25	6/2us/step	_	loss:	103014/.93/5
Epoch 23/50 2930/2930 ————————————————————————————————————	26	607us/sten	_	1000	10603/16 2500
Epoch 24/50	23	09/us/step		1033.	100954012500
2930/2930 ————	2s	755us/step	_	loss:	1063490.5000
Epoch 25/50		, , , , , , , , , ,		10001	
2930/2930 —————	2s	676us/step	_	loss:	1079514.0000
Epoch 26/50					
2930/2930 —————	2s	667us/step	_	loss:	1060060.8750
Epoch 27/50	_			-	
2930/2930 —	2s	667us/step	_	loss:	1010992.0625
Epoch 28/50 2930/2930 ————————————————————————————————————	26	7/200/0+00		10001	004149 0625
Epoch 29/50	25	/43us/step	_	1055	994140.0023
2930/2930 ————	2s	638us/step	_	loss:	989090.7500
Epoch 30/50		00000, 010p		10001	
	2s	643us/step	_	loss:	1028970.4375
Epoch 31/50					
2930/2930 —————	2s	623us/step	_	loss:	1113377.6250
Epoch 32/50	_	006 / 1		-	4040707 7500
2930/2930 ————————————————————————————————————	25	836us/step	_	loss:	1042/2/./500
Epoch 33/50 2930/2930 ————————————————————————————————————	3.0	007us/sten		1000	103/1705 1350
Epoch 34/50	25	90/us/step	_	1055.	1034/03.1230
2930/2930 ————	2s	725us/step	_	loss:	1034038.0625
Epoch 35/50		,			
2930/2930 ——————	2s	773us/step	_	loss:	976265.6875
Epoch 36/50		·			
2930/2930 —————	2s	760us/step	_	loss:	1052751.8750
Epoch 37/50	_	760 / :		,	050242 2425
2930/2930 ————————————————————————————————————	2s	/b8us/step	_	loss:	958318.8125
Epoch 38/50 2930/2930 ————————————————————————————————————	2-	77546/6+65		1000:	1016670 1250
Epoch 39/50	25	//Jus/scep	_	1055	T0100/A 1720
Lhocu 73/20					

```
2s 763us/step - loss: 994902.9375
2930/2930 -
Epoch 40/50
2930/2930 -
                         2s 764us/step - loss: 1016673.6250
Epoch 41/50
2930/2930 -
                           - 2s 767us/step - loss: 1090276.1250
Epoch 42/50
2930/2930 -
                          2s 764us/step - loss: 993320.9375
Epoch 43/50
2930/2930 -
                          2s 757us/step - loss: 1106642.2500
Epoch 44/50
                          2s 771us/step - loss: 1057016.5000
2930/2930 -
Epoch 45/50
2930/2930 -
                            - 2s 767us/step - loss: 1026353.5625
Epoch 46/50
2930/2930 -
                         2s 763us/step - loss: 1100802.1250
Epoch 47/50
2930/2930 -
                          — 2s 774us/step - loss: 1038549.4375
Epoch 48/50
2930/2930 -
                         2s 772us/step - loss: 1009300.7500
Epoch 49/50
2930/2930 -
                     2s 766us/step - loss: 979395.6250
Epoch 50/50
2930/2930 -
                           — 3s 868us/step - loss: 1120623.7500
1465/1465 -
                         1s 710us/step
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa
rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi
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/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super(). init (activity regularizer=activity regularizer, **kwargs)

```
2930/2930 -
                3s 746us/step - loss: 5418962.5000
Epoch 2/50
2930/2930 -
                      2s 728us/step - loss: 3729758.7500
Epoch 3/50
2930/2930 -
                          — 2s 713us/step - loss: 4566484.0000
Epoch 4/50
2930/2930 -
                       2s 738us/step - loss: 10945004.0000
Epoch 5/50
2930/2930 -
                         — 2s 736us/step - loss: 9493165.0000
Epoch 6/50
2930/2930 -
                         2s 696us/step - loss: 3435073.2500
Epoch 7/50
                         2s 737us/step - loss: 6891285.5000
2930/2930 -
Epoch 8/50
2930/2930 -
                       2s 727us/step - loss: 2338591.0000
Epoch 9/50
```

2930/2930 ————	2s	741us/step	_	loss:	3080351.7500
Epoch 10/50					
2930/2930 — Epoch 11/50	25	/19us/step	_	loss:	4256655 . 0000
2930/2930 ————	25	729us/sten	_	1055	3089318.5000
Epoch 12/50		7234373100			300331013000
2930/2930 ————	2s	720us/step	_	loss:	1954573.6250
Epoch 13/50					
2930/2930 —————	2s	733us/step	-	loss:	3062416.0000
Epoch 14/50	_			_	
2930/2930 —	2 s	715us/step	-	loss:	6827201.0000
Epoch 15/50 2930/2930 ————————————————————————————————————	26	721uc/s+on		10001	0020210 0000
Epoch 16/50	25	/31us/step	_	1055:	0039219.0000
2930/2930 ————	2s	719us/step	_	loss:	4581700.5000
Epoch 17/50		,			
2930/2930 ——————	2s	730us/step	_	loss:	1614837.0000
Epoch 18/50					
2930/2930 ————————————————————————————————————	2s	717us/step	-	loss:	2607950.2500
Epoch 19/50 2930/2930 ————————————————————————————————————	2-	712 / 0 + 0 =		1	1041420 7500
Epoch 20/50	25	/12us/step	_	toss:	1841420./500
2930/2930 ————	25	723us/sten	_	loss:	5037111.5000
Epoch 21/50		, 2343, 310p			303711113000
2930/2930 —————	2s	718us/step	_	loss:	2532582.7500
Epoch 22/50					
2930/2930 ————	2s	701us/step	-	loss:	3962762.0000
Epoch 23/50 2930/2930 ————————————————————————————————————	2.	72446/6+00		10001	2152200 5000
Epoch 24/50	25	724us/step	_	1055:	3132209.3000
2930/2930 ————	2s	736us/step	_	loss:	11076134.0000
Epoch 25/50					
	2s	715us/step	-	loss:	2620776.2500
Epoch 26/50	_	706 / 1		,	4705242 5000
2930/2930 — Epoch 27/50	25	/wous/step	_	LOSS:	4785343.5000
2930/2930 ————	2s	731us/step	_	loss:	1706353.8750
Epoch 28/50		, 5 = 6.5, 5 1 6 6		10001	
2930/2930 —————	2s	729us/step	-	loss:	3960338.2500
Epoch 29/50					
2930/2930 —	2s	782us/step	-	loss:	2894446.2500
Epoch 30/50 2930/2930 ————————————————————————————————————	26	926us /s+on		10001	2147156 0000
Epoch 31/50	25	030us/step	_	1055:	2147130.0000
2930/2930 ————	2s	757us/step	_	loss:	9016243.0000
Epoch 32/50					
2930/2930 —————	2s	757us/step	-	loss:	1351976.3750
Epoch 33/50				_	
2930/2930 —	2s	755us/step	-	loss:	3138457.0000
Epoch 34/50					

```
2s 736us/step - loss: 2775440.7500
2930/2930 -
Epoch 35/50
2930/2930 -
                           2s 748us/step - loss: 2683959.0000
Epoch 36/50
2930/2930 -
                             - 2s 755us/step - loss: 4266536.5000
Epoch 37/50
2930/2930 -
                            — 2s 757us/step - loss: 2678114.0000
Epoch 38/50
2930/2930 -
                             - 2s 767us/step - loss: 3548616.7500
Epoch 39/50
2930/2930 -
                             - 2s 749us/step - loss: 1794830.2500
Epoch 40/50
2930/2930 -
                             - 2s 751us/step - loss: 4723834.5000
Epoch 41/50
2930/2930 -
                           2s 754us/step - loss: 2719125.5000
Epoch 42/50
2930/2930 -
                            - 2s 753us/step - loss: 2137838.5000
Epoch 43/50
2930/2930 -
                          2s 732us/step - loss: 2042851.1250
Epoch 44/50
2930/2930 -
                         2s 740us/step - loss: 6248136.5000
Epoch 45/50
2930/2930 -
                           — 2s 745us/step - loss: 6219887.0000
Epoch 46/50
2930/2930 -
                          2s 741us/step - loss: 4689745.0000
Epoch 47/50
2930/2930 -
                             - 2s 751us/step - loss: 7473517.5000
Epoch 48/50
2930/2930 -
                          2s 734us/step - loss: 4725854.5000
Epoch 49/50
2930/2930 -
                           2s 727us/step - loss: 2188293.5000
Epoch 50/50
2930/2930 -
                             - 2s 747us/step - loss: 1243482.3750
1465/1465 -
                             - 1s 700us/step
Epoch 1/50
```

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
      1465/1465
      2s 750us/step - loss: 8667551.0000

      Epoch 2/50
      1465/1465
      1s 751us/step - loss: 3032395.5000

      Epoch 3/50
      1s 734us/step - loss: 1554281.0000

      Epoch 4/50
      1s 734us/step - loss: 1554281.0000
```

	- 1s 732us/step - loss: 3019379.2500
Epoch 5/50 1465/1465 ————————————————————————————————————	- 1s 742us/step - loss: 2481659.0000
Epoch 6/50	
	- 1s 740us/step - loss: 4356525.5000
Epoch 7/50	
	- 1s 725us/step - loss: 2451490.7500
Epoch 8/50	
	- 1s 743us/step - loss: 3584231.5000
Epoch 9/50	- 1s 723us/step - loss: 2790342.7500
Epoch 10/50	- 15 /23us/step - toss: 2/90342./300
	- 1s 731us/step - loss: 4926309.5000
Epoch 11/50	- 13 /31u3/31cp - 1033. 492030913000
	- 1s 727us/step - loss: 3781456.0000
Epoch 12/50	
	- 1s 727us/step - loss: 4238590.5000
Epoch 13/50	·
1465/1465 ————————————————————————————————————	- 1s 736us/step - loss: 2014464.1250
Epoch 14/50	
	- 1s 736us/step - loss: 3091789.2500
Epoch 15/50	
	- 1s 731us/step - loss: 1303586.5000
Epoch 16/50	4 704 / 1 3 3504604 7500
	- 1s 731us/step - loss: 2591684.7500
Epoch 17/50	- 1s 718us/step - loss: 1340351.1250
Epoch 18/50	15 /18us/step - toss: 1340331.1230
	- 1s 710us/step - loss: 4887825.0000
Epoch 19/50	- 13 / 1003/ 3 tcp
	- 1s 717us/step - loss: 2693005.2500
Epoch 20/50	•
1465/1465 ————————————————————————————————————	- 1s 724us/step - loss: 7650117.0000
Epoch 21/50	
	- 1s 725us/step - loss: 6648945.0000
Epoch 22/50	
	- 1s 855us/step - loss: 2966646.2500
Epoch 23/50	1- 725/
	- 1s 735us/step - loss: 2998349.7500
Epoch 24/50	- 1s 734us/step - loss: 5077535.5000
Epoch 25/50	- 15 /34u3/3tep - toss. 30//333.3000
•	- 1s 737us/step - loss: 3308036.2500
Epoch 26/50	
	- 1s 739us/step - loss: 1610377.0000
Epoch 27/50	
1465/1465 ————————————————————————————————————	- 1s 721us/step - loss: 2392253.5000
Epoch 28/50	
	- 1s 724us/step - loss: 2670355.0000
Epoch 29/50	

1465/1465 ————————————————————————————————————	- 1s 741us/step - loss: 2568490.5000
Epoch 30/50	
	• 1s 733us/step - loss: 3174681.2500
Epoch 31/50	
	- 1s 729us/step - loss: 2624816.0000
Epoch 32/50	. 754 / /
	- 1s 751us/step - loss: 5989569.5000
Epoch 33/50	1. 742/2
Epoch 34/50	- 1s 743us/step - loss: 3750063.7500
	- 1s 753us/step - loss: 2755472.2500
Epoch 35/50	15 /33us/step - toss. 2/334/2.2300
1465/1465	- 1s 756us/step - loss: 2662954.7500
Epoch 36/50	23 /30d3/3tcp t033: 2002334:/300
	• 1s 773us/step - loss: 2412576.5000
Epoch 37/50	
	• 1s 769us/step - loss: 1595996.2500
Epoch 38/50	•
1465/1465 ————————————————————————————————————	• 1s 771us/step - loss: 1825146.1250
Epoch 39/50	
1465/1465 ————————————————————————————————————	- 1s 763us/step - loss: 3305945.2500
Epoch 40/50	
	- 1s 742us/step - loss: 2393249.5000
Epoch 41/50	_
	- 1s 744us/step - loss: 1495760.2500
Epoch 42/50	4 740 / 1
	• 1s 719us/step - loss: 5758390.5000
Epoch 43/50	- 1s 734us/step - loss: 3492720.0000
Epoch 44/50	15 /34us/step - toss: 3492/20.0000
	- 1s 743us/step - loss: 2157506.0000
Epoch 45/50	23 / 43d3/3ccp (033) 213/30010000
· ·	- 1s 714us/step - loss: 2362300.0000
Epoch 46/50	
•	• 1s 722us/step - loss: 4282284.5000
Epoch 47/50	·
1465/1465	• 1s 730us/step - loss: 3333512.0000
Epoch 48/50	
1465/1465 ————————————————————————————————————	- 1s 713us/step - loss: 2435626.7500
Epoch 49/50	
	• 1s 749us/step - loss: 5138271.5000
Epoch 50/50	,
	- 1s 755us/step - loss: 2812659.7500
733/733 1	.s bybus/step
Epoch 1/50	

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super(). init (activity regularizer=activity regularizer, **kwarqs)

super()init(activity_r	egutarizer=activity_regutarizer, **kwa	ir gs
1465/1465 —————	- 2s 732us/step - loss: 6402157.0000	
Epoch 2/50		
1465/1465 ——————	- 1s 719us/step - loss: 1397866.0000	
Epoch 3/50		
	- 1s 740us/step - loss: 1146442.1250	
Epoch 4/50		
	- 1s 734us/step - loss: 1089698.1250	
Epoch 5/50		
	- 1s 723us/step - loss: 1097025.5000	
Epoch 6/50		
	- 1s 763us/step - loss: 1013353.7500	
Epoch 7/50	4 704 / 1 1 4000000 4050	
	- 1s 724us/step - loss: 1080600.1250	
Epoch 8/50	1- 712/	
	- 1s 713us/step - loss: 985874.3750	
Epoch 9/50	- 1s 726us/step - loss: 1086407.5000	
Epoch 10/50	- 15 /2005/Step - toss: 1080407.5000	
1465/1465	- 1s 728us/step - loss: 1075068.8750	
Epoch 11/50	- 15 /2003/Step - toss. 10/3000.0/30	
	- 1s 736us/step - loss: 1068944.7500	
Epoch 12/50	23 /30d3/3ccp	
	- 1s 712us/step - loss: 1059043.7500	
Epoch 13/50		
	- 1s 719us/step - loss: 1052017.2500	
Fnoch 14/50	•	
1465/1465 ————————————————————————————————————	- 1s 735us/step - loss: 1019667.5625	
Epoch 15/50		
1465/1465	- 1s 726us/step - loss: 1022277.9375	
Epoch 16/50		
	- 1s 744us/step - loss: 1070412.1250	
Epoch 17/50		
	- 1s 732us/step - loss: 1003395.3125	
Epoch 18/50	_	
	- 1s 734us/step - loss: 1024843.1250	
Epoch 19/50	4 700 / / 1 4050005 4050	
	- 1s 726us/step - loss: 1058695.1250	
Epoch 20/50	1. 720.00 /ohon lass. 1002501 0000	
	- 1s 729us/step - loss: 1082581.0000	
Epoch 21/50	- 1s 738us/step - loss: 1122062.1250	
1403/1403	- 15 /30us/step - t0ss: 1122002.1250	

Frach 22/F0				
Epoch 22/50 1465/1465	1ς	732us/sten -	1055	1009777 . 0000
Epoch 23/50	13	732u3/3ccp	(033.	1003///10000
1465/1465 ————————————————————————————————————	1s	723us/step -	loss:	998152,0625
Epoch 24/50		,		
1465/1465 ———————	1 s	734us/step -	loss:	1116493.5000
Epoch 25/50				
1465/1465 ——————	1 s	748us/step -	loss:	1058959.7500
Epoch 26/50				
1465/1465 ——————	1 s	725us/step -	loss:	986095.9375
Epoch 27/50	_	740 ()	-	4046006 0605
1465/1465	ls	/40us/step -	loss:	1016836.0625
Epoch 28/50 1465/1465 ————————————————————————————————————	1.	72246/6+65	10001	006775 6075
Epoch 29/50	15	/33us/step -	1055:	900//3.00/3
1465/1465 ————	1 c	724us/sten -	1055.	1001130 8750
Epoch 30/50	13	72403/3CCP	(033.	103113310730
1465/1465 ————————————————————————————————————	1s	727us/step -	loss:	996969.0000
Epoch 31/50		1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1		
1465/1465	1 s	728us/step -	loss:	951688.6875
Epoch 32/50				
1465/1465 ——————	1 s	729us/step -	loss:	1048245.3125
Epoch 33/50				
1465/1465 —————	1 s	733us/step –	loss:	1018739.8125
Epoch 34/50		707 / 1	,	4062522 2750
1465/1465 ————————————————————————————————————	IS	/2/us/step -	loss:	1063523.3750
Epoch 35/50 1465/1465 ————————————————————————————————————	1.	720us /stop	10001	055506 2125
Epoch 36/50	12	/30us/step -	1055.	90000.0120
1465/1465 —————	1s	740us/sten -	loss:	1004593.1875
Epoch 37/50		, ,	10001	
1465/1465 —————————	1s	731us/step -	loss:	1095364.1250
Epoch 38/50				
1465/1465 ——————	1 s	719us/step -	loss:	983096.3750
Epoch 39/50				
1465/1465	1 s	677us/step –	loss:	1017991.8125
Epoch 40/50 1465/1465 ————————————————————————————————————	1.	725us /stop	10001	1016772 0275
Epoch 41/50	12	/33us/step -	1055	1010//3.93/3
1465/1465 —————	1s	748us/sten -	loss:	1008491.6250
Epoch 42/50		, 10d3, 3 ccp		100013110230
1465/1465 —————	1s	743us/step -	loss:	989173.8750
Epoch 43/50		·		
1465/1465 —————————	1 s	730us/step -	loss:	970759.7500
Epoch 44/50				
1465/1465 ———————	1 s	736us/step -	loss:	985371.3125
Epoch 45/50	_	700 / :	-	005774 5555
1465/1465 ————————————————————————————————————	1s	/29us/step -	loss:	985774.5625
Epoch 46/50	1.	72246/5+55	1000-	1046221 7500
1465/1465 ———————	TS	/23us/step -	LOSS:	1040321./500

```
Epoch 47/50

1465/1465 — 1s 727us/step - loss: 1147023.1250

Epoch 48/50

1465/1465 — 1s 735us/step - loss: 989743.8125

Epoch 49/50

1465/1465 — 1s 734us/step - loss: 1005950.5625

Epoch 50/50

1465/1465 — 1s 739us/step - loss: 999206.8750

733/733 — 1s 702us/step

Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                       2s 733us/step - loss: 8914086.0000
Epoch 2/50
                          1s 698us/step - loss: 1997923.7500
1465/1465 -
Epoch 3/50
1465/1465 -
                          1s 755us/step - loss: 4287553.5000
Epoch 4/50
1465/1465 -
                            - 1s 709us/step - loss: 6711330.0000
Epoch 5/50
1465/1465 -
                             - 1s 719us/step - loss: 4029139.7500
Epoch 6/50
1465/1465 -
                           1s 719us/step - loss: 2326475.2500
Epoch 7/50
                          1s 730us/step - loss: 1703761.5000
1465/1465 -
Epoch 8/50
1465/1465 -
                             - 1s 718us/step - loss: 1704480.6250
Epoch 9/50
1465/1465 -
                            - 1s 731us/step - loss: 6049214.5000
Epoch 10/50
                            - 1s 713us/step - loss: 4167941.5000
1465/1465 -
Epoch 11/50
1465/1465 -
                             - 1s 713us/step - loss: 7486760.5000
Epoch 12/50
1465/1465 -
                             - 1s 728us/step - loss: 5263745.5000
Epoch 13/50
                          1s 725us/step - loss: 4756955.5000
1465/1465 -
Epoch 14/50
1465/1465 -
                             - 1s 726us/step - loss: 4463939.0000
Epoch 15/50
1465/1465 -
                           1s 727us/step - loss: 1779568.7500
Epoch 16/50
```

- **1s** 724us/step - loss: 4858779.0000

1465/1465 -

F 17 /FO					
Epoch 17/50 1465/1465 ————————————————————————————————————	1.	603us/stop		10001	6106677 5000
Epoch 18/50	12	093us/step	_	1055.	0100077.3000
1465/1465 —————	1s	676us/step	_	loss:	3382508,0000
Epoch 19/50		,			
1465/1465	1 s	683us/step	_	loss:	3742548.0000
Epoch 20/50					
1465/1465 ———————	1 s	706us/step	-	loss:	2075334.0000
Epoch 21/50		704 / 1			2004707 7500
1465/1465 ————————————————————————————————————	IS	/24us/step	_	loss:	2001/0/./500
Epoch 22/50 1465/1465 ————————————————————————————————————	1 c	713us/sten	_	1000	3112100 2500
Epoch 23/50	13	713u3/3tcp			311210012300
1465/1465 ————————————————————————————————————	1s	709us/step	_	loss:	1558097,0000
Epoch 24/50		,			
1465/1465	1 s	694us/step	-	loss:	3203965.2500
Epoch 25/50					
1465/1465 —————	1 s	695us/step	-	loss:	2129255.0000
Epoch 26/50 1465/1465 ————————————————————————————————————	1.	710/		1	CE10022 F000
Epoch 27/50	15	/18us/step	_	LOSS:	0519922.5000
1465/1465 ————————————————————————————————————	1 c	721us/sten	_	1055	1976386 5000
Epoch 28/50		7210373 CCP			137030013000
1465/1465 —————	1 s	682us/step	_	loss:	6450674.0000
Epoch 29/50					
1465/1465 ————————————————————————————————————	1 s	710us/step	-	loss:	6877500.0000
Epoch 30/50				_	
1465/1465 ————————————————————————————————————	1 s	673us/step	-	loss:	3403810.5000
Epoch 31/50 1465/1465 ————————————————————————————————————	1.0	74000/6+00		10001	6657726 0000
Epoch 32/50	12	/40us/step	_	10551	0037720.0000
1465/1465 ————	1s	698us/step	_	loss:	1975562.0000
Epoch 33/50		отошо, отор			
1465/1465	1 s	711us/step	-	loss:	7239101.5000
Epoch 34/50					
1465/1465 ————————————————————————————————————	1 s	707us/step	-	loss:	4442404.0000
Epoch 35/50	1.	712/a+an		1	E162007 F000
1465/1465 — Epoch 36/50	IS	/13us/step	_	LOSS:	5102807.5000
1465/1465 ——————	1 c	601us/sten	_	1055.	1481234 0000
Epoch 37/50	13	031u3/3tcp			140125410000
1465/1465	1s	713us/step	_	loss:	5339932.5000
Epoch 38/50					
1465/1465 ——————	1 s	698us/step	-	loss:	7590733.0000
Epoch 39/50	_				
1465/1465	1s	/10us/step	-	loss:	2971163.0000
Epoch 40/50	1.	72/112/2+22		1000	2121107 0000
1465/1465 ————————————————————————————————————	TS	/24u5/5tep	_	LUSS:	2171101 0000
1465/1465 ————	15	710us/sten	_	loss:	4809152.0000
		. 1003, 3 сер		.0551	.55515210000

```
Epoch 42/50
1465/1465 -
                          ---- 1s 715us/step - loss: 1614974.1250
Epoch 43/50
1465/1465 -
                             - 1s 694us/step - loss: 3047810.2500
Epoch 44/50
                             - 1s 701us/step - loss: 1666264.8750
1465/1465 -
Epoch 45/50
1465/1465 -
                             - 1s 720us/step - loss: 2717410.5000
Epoch 46/50
1465/1465 -
                             - 1s 717us/step - loss: 1453417.8750
Epoch 47/50
1465/1465 -
                           1s 698us/step - loss: 2850181.0000
Epoch 48/50
1465/1465 -
                           — 1s 744us/step - loss: 2231719.7500
Epoch 49/50
1465/1465 -
                            - 1s 695us/step - loss: 5063966.0000
Epoch 50/50
1465/1465 -
                          1s 722us/step - loss: 2180088.2500
733/733 —
                       1s 691us/step
Epoch 1/50
```

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
3s 722us/step - loss: 13215248.0000
2930/2930 ———
Epoch 2/50
                         2s 715us/step - loss: 3886113.5000
2930/2930 -
Epoch 3/50
2930/2930 -
                           — 2s 718us/step - loss: 8970445.0000
Epoch 4/50
                          2s 711us/step - loss: 4916015.5000
2930/2930 -
Epoch 5/50
                          2s 705us/step - loss: 3029945.2500
2930/2930 -
Epoch 6/50
2930/2930 -
                            - 2s 710us/step - loss: 4096604.5000
Epoch 7/50
2930/2930 -
                           - 2s 700us/step - loss: 2238780.5000
Epoch 8/50
                         2s 714us/step - loss: 5356117.5000
2930/2930 -
Epoch 9/50
2930/2930 -
                            - 2s 710us/step - loss: 4688887.5000
Epoch 10/50
2930/2930 -
                         2s 707us/step - loss: 1904112.2500
Epoch 11/50
2930/2930 -
                            - 2s 698us/step - loss: 3963224.0000
```

Epoch 12/50						
2930/2930 —————	25	695us/sten	_	1055.	5148308 000	a
Epoch 13/50	23	033u3/3ccp			31403001000	0
2930/2930 ————	2s	716us/step	_	loss:	5479020.500	0
Epoch 14/50		,				
2930/2930 —————	2s	706us/step	_	loss:	4899324.000	0
Epoch 15/50		•				
2930/2930 —————	2s	703us/step	-	loss:	6991726.000	0
Epoch 16/50						
2930/2930 —————	2s	705us/step	-	loss:	3725251.500	0
Epoch 17/50	_	700 / 1		-	2000420 250	_
2930/2930 ————————————————————————————————————	2s	/02us/step	-	loss:	3088139.250	0
Epoch 18/50 2930/2930 ————————————————————————————————————	20	70/115/5+00		10001	2712620 750	a
Epoch 19/50	25	704us/step	_	10551	2/12020./30	U
2930/2930 ————	25	695us/sten	_	1055.	2167847 - 750	a
Epoch 20/50		033d3/3ccp			21070471730	•
2930/2930 ————	2s	704us/step	_	loss:	2270448.500	0
Epoch 21/50		-				
2930/2930 —————	2s	726us/step	-	loss:	4789021.500	0
Epoch 22/50						
2930/2930 ————	2s	702us/step	-	loss:	3150654.000	0
Epoch 23/50	2 -	C00		1	2700262 750	^
2930/2930 ————————————————————————————————————	ZS	689us/step	_	loss:	3/89362./50	0
Epoch 24/50 2930/2930 ————————————————————————————————————	25	701us/sten	_	1000	1755/118 750	a
Epoch 25/50	23	70103/31Cp		(033.	17334101730	U
2930/2930 ————	2s	699us/step	_	loss:	3261573.000	0
Epoch 26/50		•				
2930/2930 —————	2s	698us/step	-	loss:	1815154.750	0
Epoch 27/50						
2930/2930 —————	2s	698us/step	-	loss:	5142473.000	0
Epoch 28/50 2930/2930 ————————————————————————————————————	2.	60646/6+05		10001	2701501 000	a
Epoch 29/50	25	ooous/step	_	1055:	3/91301.000	U
2930/2930 ————	2s	724us/step	_	loss:	5940831.000	0
Epoch 30/50		, = , 0, 0, 0, 0			30.000=1000	•
2930/2930 —————	2s	697us/step	_	loss:	2533072.750	0
Epoch 31/50						
2930/2930 —————	2s	692us/step	-	loss:	2041811.375	0
Epoch 32/50	_			_		_
2930/2930 ————————————————————————————————————	2s	/10us/step	-	loss:	1939108.500	0
Epoch 33/50	26	607us/stan		10001	7022102 000	a
2930/2930 — Epoch 34/50	25	03/u5/5teb	_	1055	1072T07 000	U
2930/2930 ————	25	702us/sten	_	loss:	2421176.250	0
Epoch 35/50		. с_35, 5 сер			, 0.250	-
2930/2930 ————	2s	708us/step	_	loss:	5651093.500	0
Epoch 36/50						
2930/2930 —————	2s	710us/step	-	loss:	4483702.000	0

```
Epoch 37/50
2930/2930 -
                        2s 720us/step - loss: 3449418.5000
Epoch 38/50
2930/2930 -
                          2s 700us/step - loss: 4990965.5000
Epoch 39/50
                           - 2s 693us/step - loss: 3254158.7500
2930/2930 -
Epoch 40/50
2930/2930 -
                            - 2s 678us/step - loss: 3944703.7500
Epoch 41/50
2930/2930 -
                            - 2s 677us/step - loss: 2740700.0000
Epoch 42/50
2930/2930 -
                          2s 702us/step - loss: 1662790.6250
Epoch 43/50
2930/2930 -
                          2s 696us/step - loss: 5747077.0000
Epoch 44/50
2930/2930 -
                          — 2s 704us/step - loss: 3967997.0000
Epoch 45/50
2930/2930 -
                         2s 701us/step - loss: 5869793.5000
Epoch 46/50
2930/2930 -
                           — 2s 713us/step - loss: 3747905.5000
Epoch 47/50
2930/2930 -
                         2s 705us/step - loss: 3311478.0000
Epoch 48/50
2930/2930 -
                         2s 704us/step - loss: 1186271.5000
Epoch 49/50
2930/2930 -
                        2s 710us/step - loss: 2063601.7500
Epoch 50/50
                  2s 696us/step - loss: 2932227.5000

1s 676us/step
2930/2930 —
1465/1465 -
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self. initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2930/2930 -
                        3s 702us/step - loss: 4467387.5000
Epoch 2/50
2930/2930 -
                         2s 705us/step - loss: 1144824.3750
Epoch 3/50
                       2s 723us/step - loss: 1037892.6875
2930/2930 -
Epoch 4/50
2930/2930 -
                         2s 714us/step - loss: 1020405.4375
Epoch 5/50
2930/2930 -
                       2s 677us/step - loss: 1113420.1250
Epoch 6/50
2930/2930 -
                           — 2s 690us/step - loss: 1035356.6250
```

F 7 /FO				
Epoch 7/50 2930/2930 ————————————————————————————————————	20	70645/5+00	10001	1022445 2125
Epoch 8/50	25	/wous/step -	10551	1033443.3123
2930/2930 ————	2s	702us/step -	loss:	1182878.7500
Epoch 9/50		, 0200, 010p		
2930/2930 —————	2s	702us/step -	loss:	1039527.1250
Epoch 10/50				
2930/2930 —————	2s	708us/step -	loss:	1022633.5625
Epoch 11/50	_		-	
2930/2930 ————————————————————————————————————	2s	/00us/step -	loss:	1064823.6250
Epoch 12/50 2930/2930 ————————————————————————————————————	26	600us/sten -	1000	1017203 5000
Epoch 13/50	23	099u3/3tep =	(033.	1017293.3000
2930/2930 ————	2s	719us/step -	loss:	1051108,2500
Epoch 14/50		,		
2930/2930 ——————	2s	695us/step -	loss:	1056718.8750
Epoch 15/50				
2930/2930 ————	2s	696us/step -	loss:	1213598.0000
Epoch 16/50 2930/2930 ————————————————————————————————————	2-	C 40 / a + a m	1	1021160 0000
Epoch 17/50	25	649us/step -	loss:	1021100.0000
2930/2930 ————	25	685us/sten -	lossi	1004141.0625
Epoch 18/50		003u3, 3 tep		100111110025
2930/2930 —————	2s	666us/step -	loss:	1111466.2500
Epoch 19/50				
2930/2930 —————	2s	683us/step -	loss:	1166737.7500
Epoch 20/50	_		-	
2930/2930 ————————————————————————————————————	2s	660us/step -	loss:	1008435.3750
Epoch 21/50 2930/2930 ————————————————————————————————————	26	66/us/sten -	1000	10080/18 1250
Epoch 22/50	23	00-и3/ 3 сер	(033.	100004011230
2930/2930 ————	2s	676us/step -	loss:	1075770.5000
Epoch 23/50		·		
2930/2930 —————	2s	673us/step -	loss:	1108271.2500
Epoch 24/50	_		-	
2930/2930 ————————————————————————————————————	2s	669us/step -	loss:	1016323.0625
Epoch 25/50 2930/2930 ————————————————————————————————————	26	685us/sten -	1000	086800 3125
Epoch 26/50	23	003u3/3tep =	1033.	90000013123
2930/2930 ————	2s	659us/step -	loss:	1061605.6250
Epoch 27/50		, -		
2930/2930 ——————	2s	693us/step -	loss:	1077302.7500
Epoch 28/50				
2930/2930 —————	2s	665us/step -	loss:	1100560.8750
Epoch 29/50	2-	670110/0400	1000	1020061 0625
2930/2930 — Epoch 30/50	25	0/wus/step -	toss:	T073001.0072
2930/2930 ————	25	718us/sten -	lossi	1048247.1875
Epoch 31/50		. 1003, 5 ccp	.0331	10 102 47 1 107 3
2930/2930 ————	2s	710us/step -	loss:	1030142.4375
		•		

```
Epoch 32/50
2930/2930 -
                         2s 708us/step - loss: 1025037.9375
Epoch 33/50
2930/2930 -
                           2s 681us/step - loss: 1031836.6875
Epoch 34/50
                            - 2s 683us/step - loss: 1118429.1250
2930/2930 -
Epoch 35/50
2930/2930 -
                            - 2s 672us/step - loss: 965309.7500
Epoch 36/50
2930/2930 -
                             - 2s 671us/step - loss: 1046337.8125
Epoch 37/50
2930/2930 -
                          2s 712us/step - loss: 1066476.6250
Epoch 38/50
2930/2930 -
                           — 2s 700us/step - loss: 1117553.0000
Epoch 39/50
2930/2930 -
                            — 2s 699us/step - loss: 972026.9375
Epoch 40/50
2930/2930 -
                          2s 702us/step - loss: 969692.1250
Epoch 41/50
2930/2930 -
                            - 2s 708us/step - loss: 963801.1250
Epoch 42/50
2930/2930 -
                          — 2s 722us/step - loss: 1076611.6250
Epoch 43/50
2930/2930 -
                          2s 730us/step - loss: 1049495.3750
Epoch 44/50
2930/2930 -
                         2s 708us/step - loss: 1005627.3750
Epoch 45/50
2930/2930 —
                          2s 701us/step - loss: 1017795.7500
Epoch 46/50
2930/2930 -
                             - 2s 715us/step - loss: 1044917.2500
Epoch 47/50
2930/2930 -
                         2s 705us/step - loss: 1011804.0625
Epoch 48/50
2930/2930 -
                            - 3s 853us/step - loss: 998518.6875
Epoch 49/50
2930/2930 -
                           — 2s 750us/step - loss: 1142412.7500
Epoch 50/50
2930/2930 -
                           — 2s 721us/step - loss: 964904.3750
                     1s 678us/step
1465/1465 -
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

2930/2930 — **3s** 710us/step - loss: 7391068.0000

Frank 2/50				
Epoch 2/50 2930/2930 ————————————————————————————————————	26	719us/sten -	1000	1025520 5000
Epoch 3/50	23	/10us/step -	1055.	492332913000
2930/2930 ————	2s	721us/step -	loss:	5850564.5000
Epoch 4/50				
2930/2930 —————	2s	715us/step -	loss:	6778266.0000
Epoch 5/50				
2930/2930 —————	2s	710us/step -	loss:	1919771.8750
Epoch 6/50				
2930/2930 —————	2s	706us/step -	loss:	4092391.5000
Epoch 7/50	_	700 / 1	,	2200276 5000
2930/2930 ————————————————————————————————————	ZS	/08us/step -	loss:	33802/6.5000
Epoch 8/50 2930/2930 ————————————————————————————————————	26	700us/stop	10001	1075225 5000
Epoch 9/50	23	709us/step -	1055.	407332313000
2930/2930 ————	2s	707us/step -	loss:	2558032.2500
Epoch 10/50		,		
2930/2930 ——————	2s	703us/step -	loss:	3536275.5000
Epoch 11/50				
2930/2930 —————	2s	701us/step -	loss:	2540791.2500
Epoch 12/50	2 -	706	1	5002602 5000
2930/2930 — Epoch 13/50	2 S	/06us/step -	loss:	5802693.5000
2930/2930 ————	25	710us/sten -	1000	1500670 5000
Epoch 14/50	23	713u3/3tcp	(033.	433307313000
2930/2930 ————	2s	720us/step -	loss:	6169078.5000
Epoch 15/50				
2930/2930 —————	2s	688us/step -	loss:	6066661.5000
Epoch 16/50	_		_	
2930/2930 ————————————————————————————————————	2s	/08us/step -	loss:	4603452.5000
Epoch 17/50 2930/2930 ————————————————————————————————————	20	711uc/stop	10001	7200102 5000
Epoch 18/50	25	/11us/step =	1055.	7390193.3000
2930/2930 ————	2s	708us/step -	loss:	2996408.7500
Epoch 19/50				
2930/2930 ——————	2s	709us/step -	loss:	3619542.0000
Epoch 20/50	_		_	
2930/2930 ————————————————————————————————————	2s	700us/step -	loss:	5159141.0000
Epoch 21/50 2930/2930 ————————————————————————————————————	20	607us/stan	10001	4060620 F000
Epoch 22/50	25	09/us/step -	1055	4000039.3000
2930/2930 ————	2s	697us/step -	loss:	3205702.0000
Epoch 23/50		00 / 00 / 0 TOP	10001	3_0070_10000
2930/2930 —————	2s	719us/step -	loss:	5566523.5000
Epoch 24/50				
2930/2930 —————	2s	718us/step -	loss:	3394908.7500
Epoch 25/50	_	700 / :	-	0.40.4700
2930/2930 ————————————————————————————————————	2s	/09us/step -	loss:	2404700.7500
Epoch 26/50 2930/2930 ————————————————————————————————————	20	71205/5+05	1000	2370004 5000
2330/2330	45	/12us/steb -	1055	23/0034.3000

Enach 27/50				
Epoch 27/50 2930/2930 ————————————————————————————————————	26	710us/sten -	1000	253/271 0000
Epoch 28/50	23	/1003/3tcp	(033.	233427110000
2930/2930 ————	2s	695us/step -	loss:	6272434.5000
Epoch 29/50		, , , , ,		
2930/2930 —————	2s	710us/step -	loss:	3191081.5000
Epoch 30/50				
2930/2930 —————	2s	701us/step -	loss:	8341565.0000
Epoch 31/50				
2930/2930 —————	2s	711us/step -	loss:	4126045.7500
Epoch 32/50	_			
2930/2930 ————————————————————————————————————	2s	/10us/step -	loss:	468/321.5000
Epoch 33/50	20	71000/0+00	10001	2646111 0000
2930/2930 — Epoch 34/50	25	/ious/step -	1055:	3040111.0000
2930/2930 ————	25	704us/sten -	1055.	2284178 7500
Epoch 35/50		70-443/3 сер	(0551	220417017500
2930/2930 ————	2s	701us/step -	loss:	3704526.7500
Epoch 36/50				
2930/2930 —————	2s	703us/step -	loss:	5882943.0000
Epoch 37/50				
2930/2930 —————	2s	701us/step -	loss:	1895842.8750
Epoch 38/50	_			
2930/2930 ————————————————————————————————————	2s	/02us/step -	loss:	2025925.2500
Epoch 39/50 2930/2930 ————————————————————————————————————	26	606us/sten -	1000	2475136 2500
Epoch 40/50	25	090us/step -	1055.	24/3130.2300
2930/2930 ————	2s	697us/step -	loss:	5072239.5000
Epoch 41/50				
2930/2930 ——————	2s	695us/step -	loss:	4239631.5000
Epoch 42/50				
2930/2930 —————	2s	694us/step –	loss:	2244896.7500
Epoch 43/50	2 -	71 4 / - +	1	2005455 5000
2930/2930 — Epoch 44/50	25	/14us/step -	loss:	2005455.5000
2930/2930 ————	25	703us/sten -	1066.	2555728 0000
Epoch 45/50	23	70303/3100	(033.	233372010000
2930/2930 ————	2s	710us/step -	loss:	3270207.0000
Epoch 46/50		·		
2930/2930 ——————	2s	703us/step -	loss:	5510122.0000
Epoch 47/50				
2930/2930 —————	2s	701us/step –	loss:	2714735.0000
Epoch 48/50	_	CO2= / = 3	1	2424646 7500
2930/2930 ————————————————————————————————————	2 S	oysus/step -	LOSS:	3431010./500
Epoch 49/50 2930/2930 ————————————————————————————————————	25	703us/stan	1000	310100/ 5000
Epoch 50/50	25	,0303/31ch -	1055	2101004.3000
2930/2930 ————	25	705us/sten -	loss:	1476942.5000
1465/1465 ————	1s	678us/step	-5551	55 .2.5500
Epoch 1/100	-	-,		
•				

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

super (/tille(accivity_re	guc	31 1201 - 60 01 11	cy_reg	italizel, **Kwaly.
1465/1465 ——————	2s	650us/step -	loss:	11455383.0000
Epoch 2/100				
1465/1465 —————	1 s	664us/step -	loss:	10799290.0000
Epoch 3/100				
1465/1465 —————	1 s	662us/step -	loss:	10269647.0000
Epoch 4/100				
1465/1465 ————	1 s	669us/step -	loss:	12289093.0000
Epoch 5/100				
1465/1465 ————	1 s	678us/step –	loss:	10715507.0000
Epoch 6/100	_		_	
1465/1465	1s	633us/step -	loss:	7507187.5000
Epoch 7/100	_		-	
1465/1465 ————	1 s	673us/step -	loss:	12646776.0000
Epoch 8/100	_		-	11501101 0000
1465/1465	ls	662us/step -	loss:	11504101.0000
Epoch 9/100		660 / 1	,	C404746 F000
1465/1465	TS	660us/step -	loss:	6494/16.5000
Epoch 10/100	1.	CE2 / a + a =	1	FFF020F F000
1465/1465 ————————————————————————————————————	IS	652us/step -	LOSS:	5559295.5000
Epoch 11/100 1465/1465	1.	CEEa /atan	1	0000607 0000
	15	ossus/step -	toss:	8992007.0000
Epoch 12/100 1465/1465	1.	661uc/s+on	10001	7107664 5000
Epoch 13/100	12	oolus/step -	10551	/19/004.3000
1465/1465 ————	1.	6/6us/sten -	1000	1727301 5000
Epoch 14/100	13	040u3/31ep -	1033.	4/2/301:3000
1465/1465	1 c	652us/sten -	1055.	4460893 5000
Epoch 15/100		032u3/3tep		440003313000
1465/1465 ————	15	663us/sten -	1055:	3262983.2500
Epoch 16/100		003u3, 310p		320230312300
1465/1465 ————	1s	626us/step -	loss:	5070400.0000
Epoch 17/100		, , .		
1465/1465 —	1 s	666us/step -	loss:	2307167.7500
Epoch 18/100				
1465/1465 —————	1 s	666us/step -	loss:	5363836.0000
Epoch 19/100		, ,		
1465/1465 ——————	1s	655us/step -	loss:	4595326.0000
Epoch 20/100				
1465/1465 ——————	1 s	640us/step -	loss:	4689534.5000
Epoch 21/100				
1465/1465	1 s	597us/step -	loss:	5135726.0000

- 1 00 /400	
Epoch 22/100	1s 633us/step - loss: 2327773.7500
Epoch 23/100	13 05503/3tcp to33: 252/7/5:7500
	1s 654us/step - loss: 2706973.2500
Epoch 24/100	
	1s 638us/step - loss: 2180772.5000
Epoch 25/100	·
1465/1465 ———————	1s 634us/step - loss: 4200833.0000
Epoch 26/100	
	1s 662us/step - loss: 2348642.7500
Epoch 27/100	
	1s 615us/step - loss: 4196534.0000
Epoch 28/100	1- 004/
	1s 684us/step - loss: 3103353.7500
Epoch 29/100	1s 700us/step - loss: 1739188.3750
Epoch 30/100	15 /0005/Step - toss. 1/39100.3/30
	1s 675us/step - loss: 7531749.0000
Epoch 31/100	23 0/303/3ccp (033: /331/43:0000
1465/1465	1s 654us/step - loss: 1873006.0000
Epoch 32/100	
1465/1465 ————————————————————————————————————	1s 661us/step - loss: 3426021.2500
Epoch 33/100	
	1s 664us/step - loss: 7008326.0000
Epoch 34/100	
	1s 649us/step - loss: 5383251.0000
Epoch 35/100	1- 656/ston loss, 2070652 7500
Epoch 36/100	1s 656us/step - loss: 3870653.7500
•	1s 653us/step - loss: 5084826.0000
Epoch 37/100	23 033u3/3tcp (033: 3004020:0000
	1s 663us/step - loss: 3477447.7500
Epoch 38/100	
	1s 667us/step - loss: 5190534.5000
Epoch 39/100	
	1s 672us/step - loss: 2133433.0000
Epoch 40/100	
	1s 651us/step - loss: 2919714.0000
Epoch 41/100	1s 633us/step - loss: 1506504.1250
Epoch 42/100	15 033us/step - toss: 1300304.1230
·	1s 619us/step - loss: 2526877.0000
Epoch 43/100	25 01343, 5100
•	1s 648us/step - loss: 5107432.5000
Epoch 44/100	·
1465/1465 ——————	1s 633us/step - loss: 2548115.7500
Epoch 45/100	
	1s 653us/step - loss: 2641551.0000
Epoch 46/100	1- (22-4-4-1
1405/1405 ——————	1s 622us/step - loss: 2852421.2500

Epoch 47/100	
	1s 661us/step - loss: 3887680.2500
Epoch 48/100	13 00103/3(cp
	1s 690us/step - loss: 6746930.0000
Epoch 49/100	
	1s 655us/step - loss: 2930251.5000
Epoch 50/100	·
1465/1465 ————————	1s 677us/step - loss: 3260896.0000
Epoch 51/100	
	1s 643us/step - loss: 7203032.0000
Epoch 52/100	
	1s 665us/step - loss: 3012574.2500
Epoch 53/100	1- 050/ 1 2720220 2500
	1s 656us/step - loss: 2730328.2500
Epoch 54/100	1s 642us/step - loss: 4620976.0000
Epoch 55/100	13 042u3/3tep - t033. 40209/0.0000
	1s 630us/step - loss: 2687247.7500
Epoch 56/100	20 05005, 510p
	1s 650us/step - loss: 2928248.0000
Epoch 57/100	·
1465/1465 ——————	1s 624us/step - loss: 7129312.0000
Epoch 58/100	
	1s 644us/step - loss: 5618585.0000
Epoch 59/100	
	1s 634us/step - loss: 6672098.0000
Epoch 60/100	1s 642us/step - loss: 3520880.5000
Epoch 61/100	15 042us/step - toss. 3320000.3000
•	1s 618us/step - loss: 2973492.7500
Epoch 62/100	
•	1s 633us/step - loss: 1648776.1250
Epoch 63/100	
	1s 622us/step - loss: 3435859.2500
Epoch 64/100	_
	1s 657us/step - loss: 5452551.5000
Epoch 65/100	1s 626us/step - loss: 2149179.7500
Epoch 66/100	15 62605/Step - toss: 21491/9./500
	1s 635us/step - loss: 6504693.0000
Epoch 67/100	23 035437 3 CCP
	1s 624us/step - loss: 6490826.5000
Epoch 68/100	
1465/1465	1s 598us/step - loss: 3062238.7500
Epoch 69/100	
	1s 652us/step - loss: 4301915.5000
Epoch 70/100	,
	1s 647us/step - loss: 2847340.2500
Epoch 71/100	1c 622ug/stop lass: 4747774 5000
1405/1405	1s 623us/step - loss: 4747774.5000

F 72/400	
Epoch 72/100	1s 645us/step - loss: 5112759.0000
Epoch 73/100	15 043us/step - toss. 3112/39:0000
	1s 631us/step - loss: 2762440.7500
Epoch 74/100	
1465/1465	1s 638us/step - loss: 3249667.2500
Epoch 75/100	
	1s 619us/step - loss: 3452146.0000
Epoch 76/100	4636343 0000
	1s 613us/step - loss: 4626343.0000
Epoch 77/100	1s 630us/step - loss: 3971350.2500
Epoch 78/100	13 03003/3tcp (033: 33/1330:2300
	1s 650us/step - loss: 3777807.2500
Epoch 79/100	,
1465/1465 ————————	1s 643us/step - loss: 3592964.2500
Epoch 80/100	
	1s 634us/step - loss: 4467221.5000
Epoch 81/100	1s 637us/step - loss: 4020935.5000
Epoch 82/100	1s 63/us/step - loss: 4020935.5000
	1s 638us/step - loss: 4969633.0000
Epoch 83/100	23 030u3/3tep 10331 430303310000
	1s 648us/step - loss: 3309543.2500
Epoch 84/100	
	1s 638us/step - loss: 2397042.0000
Epoch 85/100	
	1s 659us/step - loss: 3266143.0000
Epoch 86/100	1s 638us/step - loss: 2705675.0000
Epoch 87/100	15 03005/5tep - toss. 2/030/3.0000
	1s 649us/step - loss: 2451713.5000
Epoch 88/100	
1465/1465	1s 638us/step - loss: 3153250.5000
Epoch 89/100	
	1s 641us/step - loss: 5402599.5000
Epoch 90/100	1- (21/
Epoch 91/100	1s 621us/step - loss: 2627987.5000
	1s 657us/step - loss: 4133855.7500
Epoch 92/100	23 03/03/3 tep 1033: 4133033:/300
· ·	1s 642us/step - loss: 1581783.5000
Epoch 93/100	·
1465/1465 ——————	1s 635us/step - loss: 6028860.0000
Epoch 94/100	
	1s 641us/step - loss: 2344765.0000
Epoch 95/100	1. 620us/ston lass 1412061 0000
Epoch 96/100	1s 620us/step - loss: 1413861.0000
	1s 638us/step - loss: 3394216.2500
1703/ 1703 ·	23 03003/31Cp 1033: 3334210:2300

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                          —— 2s 647us/step - loss: 9452276.0000
Epoch 2/100
1465/1465 -
                             — 1s 669us/step - loss: 9179713.0000
Epoch 3/100
1465/1465 -
                              - 1s 658us/step - loss: 8776061.0000
Epoch 4/100
1465/1465 -
                              - 1s 635us/step - loss: 8036708.0000
Epoch 5/100
1465/1465 -
                              - 1s 639us/step - loss: 7333615.5000
Epoch 6/100
1465/1465 -
                              - 1s 627us/step - loss: 6542272.0000
Epoch 7/100
                              - 1s 648us/step - loss: 5638516.5000
1465/1465 -
Epoch 8/100
1465/1465 -
                              - 1s 642us/step - loss: 5003795.5000
Epoch 9/100
1465/1465 -
                              - 1s 622us/step - loss: 4147475.2500
Epoch 10/100
                              - 1s 645us/step - loss: 3522550.5000
1465/1465 -
Epoch 11/100
1465/1465 -
                              - 1s 633us/step - loss: 2943152.0000
Epoch 12/100
1465/1465 -
                              - 1s 638us/step - loss: 2521489.2500
Epoch 13/100
1465/1465 -
                              - 1s 634us/step - loss: 2208783.0000
Epoch 14/100
1465/1465 •
                              - 1s 638us/step - loss: 2050730.7500
Epoch 15/100
1465/1465 -
                              - 1s 627us/step - loss: 1947248.1250
Epoch 16/100
```

- **1s** 655us/step - loss: 1842752.3750

1465/1465 -

F 17/100	
Epoch 17/100	1s 626us/step - loss: 1799117.6250
Epoch 18/100	15 02005/Step - toss. 1/9911/.0230
	1s 642us/step - loss: 1661507.5000
Epoch 19/100	
1465/1465	1s 645us/step - loss: 1551737.0000
Epoch 20/100	
	1s 647us/step - loss: 1528637.8750
Epoch 21/100	1 624 / 1 1 1 1542066 0000
	1s 634us/step - loss: 1513066.0000
Epoch 22/100	1s 651us/step - loss: 1501168.0000
Epoch 23/100	13 05103/3 tcp (033: 1501100:0000
	1s 655us/step - loss: 1461503.5000
Epoch 24/100	
1465/1465 ———————	1s 673us/step - loss: 1452150.8750
Epoch 25/100	
	1s 664us/step - loss: 1409057.2500
Epoch 26/100	1s 651us/step - loss: 1335680.7500
Epoch 27/100	15 051us/step - loss: 1335080./500
	1s 682us/step - loss: 1306073.8750
Epoch 28/100	23 002u3/3tcp
	1s 651us/step - loss: 1312481.6250
Epoch 29/100	
	1s 657us/step - loss: 1224511.5000
Epoch 30/100	
	1s 640us/step - loss: 1314724.0000
Epoch 31/100	1s 682us/step - loss: 1232434.0000
Epoch 32/100	15 002us/step - toss. 1232434.0000
•	1s 663us/step - loss: 1159276.3750
Epoch 33/100	
1465/1465	1s 667us/step - loss: 1218073.8750
Epoch 34/100	
	1s 674us/step - loss: 1156184.1250
Epoch 35/100	1- (71/
Epoch 36/100	1s 671us/step - loss: 1171304.2500
	1s 663us/step - loss: 1204745.0000
Epoch 37/100	23 00303/3tcp t033: 1204/43:0000
•	1s 666us/step - loss: 1136732.3750
Epoch 38/100	·
1465/1465 ——————	1s 671us/step - loss: 1239874.5000
Epoch 39/100	
	1s 667us/step - loss: 1107507.7500
Epoch 40/100	1e 667ug/ston loos 1000173 6350
Epoch 41/100	1s 667us/step - loss: 1089172.6250
	1s 658us/step - loss: 1133476.0000
1703/ 1703 ·	25 05003/51Cp 1033. 11554/010000

- 1 10 1100	
Epoch 42/100	1s 668us/step - loss: 1119087.8750
Epoch 43/100	15 000us/step - toss. 1119007.0730
	1s 745us/step - loss: 1111817.6250
Epoch 44/100	
1465/1465	1s 731us/step - loss: 1110435.3750
Epoch 45/100	
	1s 729us/step - loss: 1119436.1250
Epoch 46/100	1 604 / 1 1 1000104 0000
	1s 694us/step - loss: 1099104.0000
Epoch 47/100	1s 696us/step - loss: 1129868.6250
Epoch 48/100	13 03003/3tcp t033: 1123000:0230
	1s 667us/step - loss: 1132874.1250
Epoch 49/100	
1465/1465	1s 679us/step - loss: 1097764.1250
Epoch 50/100	
	1s 684us/step - loss: 1095655.6250
Epoch 51/100	1 606 / 1 1 102676 2425
	1s 686us/step - loss: 1036876.3125
Epoch 52/100	1s 678us/step - loss: 1004826.7500
Epoch 53/100	13 07003/3(cp
	1s 684us/step - loss: 1081309.5000
Epoch 54/100	
	1s 681us/step - loss: 1062540.3750
Epoch 55/100	
	1s 680us/step - loss: 1134661.6250
Epoch 56/100	1s 672us/step - loss: 1093844.3750
Epoch 57/100	15 6/2us/step - toss: 1093844.3/30
	1s 683us/step - loss: 1126589.3750
Epoch 58/100	25 00343, 5105 112030313,30
	1s 683us/step - loss: 1157280.0000
Epoch 59/100	
	1s 681us/step - loss: 1024537.1875
Epoch 60/100	1 606 / 1 1 1057040 1250
	1s 686us/step - loss: 1057840.1250
Epoch 61/100	1s 680us/step - loss: 1016371.6250
Epoch 62/100	15 00003/3tep - t033: 10103/1:0230
•	1s 680us/step - loss: 1012603.1875
Epoch 63/100	
1465/1465	1s 681us/step - loss: 1005377.0625
Epoch 64/100	
	1s 688us/step - loss: 1064945.0000
Epoch 65/100	1 742 v / st v 1 422 722 4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	1s 712us/step - loss: 1035984.3125
Epoch 66/100	1s 700us/step - loss: 1054600.3750
T-103/ T-103	13 /0003/Stcp - t055. 1034000.3/30

Epoch 67/100	
	1s 688us/step - loss: 1086537.2500
Epoch 68/100	23 000d3, 5 tep 100033, 12300
	1s 690us/step - loss: 1057589.2500
Epoch 69/100	•
1465/1465	1s 714us/step - loss: 1066853.3750
Epoch 70/100	
	1s 694us/step - loss: 1148824.3750
Epoch 71/100	
	1s 691us/step - loss: 1027040.8750
Epoch 72/100	1- 600/2+22
Epoch 73/100	1s 688us/step - loss: 1065851.8750
	1s 664us/step - loss: 1092017.7500
Epoch 74/100	13 004u3/3ccp
	1s 662us/step - loss: 1119577.1250
Epoch 75/100	
1465/1465 ——————	1s 698us/step - loss: 1105921.2500
Epoch 76/100	
	1s 687us/step - loss: 1037526.1250
Epoch 77/100	1s 683us/step - loss: 1005320.8125
Epoch 78/100	15 003us/step - toss: 1003320.0123
	1s 694us/step - loss: 1092811.5000
Epoch 79/100	
1465/1465	1s 678us/step - loss: 1035214.0625
Epoch 80/100	
	1s 680us/step - loss: 1103575.6250
Epoch 81/100	1- 005/
Epoch 82/100	1s 685us/step - loss: 1076458.2500
•	1s 682us/step - loss: 1061821.1250
Epoch 83/100	23 00243, 3 (6)
1465/1465 ———————	1s 675us/step - loss: 978866.8750
Epoch 84/100	
	1s 679us/step - loss: 1112981.5000
Epoch 85/100	1- 675/
	1s 675us/step - loss: 1077275.7500
Epoch 86/100	1s 666us/step - loss: 1141104.8750
Epoch 87/100	23 00003/3cep
	1s 661us/step - loss: 1053937.2500
Epoch 88/100	·
	1s 674us/step - loss: 1073563.8750
Epoch 89/100	
	1s 684us/step - loss: 1073488.1250
Epoch 90/100	1s 693us/step - loss: 1041447.5000
Epoch 91/100	15 093uS/Step - t0SS: 104144/.5000
	1s 690us/step - loss: 1077119.5000
= 199/ ±709	25 05005/5tcp t0551 10//11515000

```
Epoch 92/100
1465/1465 -
                           1s 700us/step - loss: 1007044.4375
Epoch 93/100
1465/1465 -
                              - 1s 739us/step - loss: 1086105.6250
Epoch 94/100
                              - 1s 724us/step - loss: 1046916.2500
1465/1465 -
Epoch 95/100
1465/1465 -
                              - 1s 707us/step - loss: 1086194.2500
Epoch 96/100
1465/1465 -
                              - 1s 686us/step - loss: 1110117.8750
Epoch 97/100
1465/1465 -
                              - 1s 682us/step - loss: 1119436.8750
Epoch 98/100
1465/1465 -
                              - 1s 679us/step - loss: 1043119.3125
Epoch 99/100
1465/1465 -
                              - 1s 673us/step - loss: 1063224.3750
Epoch 100/100
1465/1465 -
                             - 1s 691us/step - loss: 1058639.0000
733/733 -
                          — 1s 686us/step
Epoch 1/100
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2s 682us/step - loss: 17249516.0000
1465/1465 —
Epoch 2/100
                             - 1s 678us/step - loss: 9826983.0000
1465/1465 -
Epoch 3/100
1465/1465 -
                              - 1s 682us/step - loss: 10644857.0000
Epoch 4/100
                              - 1s 677us/step - loss: 14708112.0000
1465/1465 -
Epoch 5/100
                              - 1s 680us/step - loss: 10092903.0000
1465/1465 -
Epoch 6/100
1465/1465 -
                              - 1s 675us/step - loss: 9042669.0000
Epoch 7/100
1465/1465 -
                              - 1s 680us/step - loss: 10014786.0000
Epoch 8/100
1465/1465 -
                              - 1s 684us/step - loss: 6998092.0000
Epoch 9/100
1465/1465 -
                              - 1s 680us/step - loss: 8886566.0000
Epoch 10/100
1465/1465 •
                              - 1s 680us/step - loss: 8382856.0000
Epoch 11/100
1465/1465 -
                              - 1s 686us/step - loss: 6994250.5000
```

- 1 40 /400	
Epoch 12/100	1s 658us/step - loss: 7420209.5000
Epoch 13/100	15 036us/step - toss: 7420209.3000
	1s 684us/step - loss: 5826767.5000
Epoch 14/100	
	1s 687us/step - loss: 6771032.0000
Epoch 15/100	
	1s 680us/step - loss: 8805364.0000
Epoch 16/100	
	1s 688us/step - loss: 6847241.0000
Epoch 17/100	1s 680us/step - loss: 7040567.0000
Epoch 18/100	13 00003/3(ep = 1033. 704030710000
	1s 679us/step - loss: 7359356.5000
Epoch 19/100	
1465/1465 ——————	1s 678us/step - loss: 7391482.0000
Epoch 20/100	
	1s 678us/step - loss: 5022520.5000
Epoch 21/100	1s 686us/step - loss: 5965059.0000
Epoch 22/100	15 686us/step - toss: 5965059.0000
	1s 680us/step - loss: 8249006.0000
Epoch 23/100	25 00003, 5 top 10331 02 1300010000
	1s 684us/step - loss: 4355829.0000
Epoch 24/100	
	1s 681us/step - loss: 5939220.0000
Epoch 25/100	
	1s 679us/step - loss: 5909130.5000
Epoch 26/100	1s 681us/step - loss: 3681132.7500
Epoch 27/100	13 00103/3(cp
	1s 679us/step - loss: 2656736.5000
Epoch 28/100	
	1s 682us/step - loss: 3543747.7500
Epoch 29/100	
	1s 682us/step - loss: 2396524.7500
Epoch 30/100	1s 681us/step - loss: 4138817.0000
Epoch 31/100	13 00103/3 (Cp
	1s 683us/step - loss: 3070937.2500
Epoch 32/100	, ,
1465/1465 —————	1s 681us/step - loss: 2226391.5000
Epoch 33/100	
	1s 677us/step - loss: 1831796.5000
Epoch 34/100	1c 675uc/cton local 2762224 7500
Epoch 35/100	1s 675us/step - loss: 2762224.7500
	1s 689us/step - loss: 6347862.0000
Epoch 36/100	
	1s 676us/step - loss: 7363403.0000
	•

- 1 0-1100	
Epoch 37/100	1s 687us/step - loss: 1907974.5000
Epoch 38/100	15 08/us/step - toss: 190/9/4.3000
	1s 688us/step - loss: 3572123.7500
Epoch 39/100	
1465/1465 ——————	1s 687us/step - loss: 4299712.5000
Epoch 40/100	
	1s 685us/step - loss: 5561477.5000
Epoch 41/100	4 602 / 1 4 4605074 7500
	1s 683us/step - loss: 1605874.7500
Epoch 42/100	1s 679us/step - loss: 1725514.7500
Epoch 43/100	13 0/3d3/3tcp to33: 1/23314:/300
	1s 664us/step - loss: 3735420.7500
Epoch 44/100	•
1465/1465 ——————	1s 685us/step - loss: 1907670.2500
Epoch 45/100	
	1s 680us/step - loss: 4954805.0000
Epoch 46/100	1s 681us/step - loss: 2256300.0000
Epoch 47/100	15 081us/step - toss. 2230300.0000
	1s 683us/step - loss: 6555063.0000
Epoch 48/100	
1465/1465 ——————	1s 682us/step - loss: 5588058.0000
Epoch 49/100	
	1s 682us/step - loss: 5038258.5000
Epoch 50/100	1- (01)/
Epoch 51/100	1s 681us/step - loss: 4064670.2500
	1s 681us/step - loss: 4425132.0000
Epoch 52/100	25 00143, 5 (0)
1465/1465 —————	1s 685us/step - loss: 4245053.0000
Epoch 53/100	
	1s 683us/step - loss: 4846074.5000
Epoch 54/100	1- (02.1-/
Epoch 55/100	1s 683us/step - loss: 2073645.3750
	1s 675us/step - loss: 3588459.5000
Epoch 56/100	25 0,343,310
	1s 688us/step - loss: 2331843.5000
Epoch 57/100	
	1s 689us/step - loss: 5825086.0000
Epoch 58/100	
	1s 687us/step - loss: 3664244.2500
Epoch 59/100	1s 684us/step - loss: 4464261.0000
Epoch 60/100	23 30743/3CCP (033: 4404201:0000
	1s 678us/step - loss: 2661911.7500
Epoch 61/100	
1465/1465 ——————	1s 684us/step - loss: 6797959.0000

Epoch 62/100	
	1s 652us/step - loss: 4156719.2500
Epoch 63/100	23 03203/3 CCP
	1s 718us/step - loss: 4936602.0000
Epoch 64/100	•
1465/1465	1s 698us/step - loss: 5307276.5000
Epoch 65/100	
1465/1465 ——————	1s 729us/step - loss: 6798220.5000
Epoch 66/100	
	1s 675us/step - loss: 4107925.0000
Epoch 67/100	1- 004/ 1 2524722 2500
	1s 684us/step - loss: 2521722.2500
Epoch 68/100	1s 682us/step - loss: 4270123.5000
Epoch 69/100	15 002us/step - toss. 42/0123.3000
· ·	1s 682us/step - loss: 3731353.2500
Epoch 70/100	10 00240, 510p 10001 370133312300
	1s 680us/step - loss: 2591161.2500
Epoch 71/100	
	1s 666us/step - loss: 4923311.5000
Epoch 72/100	
	1s 698us/step - loss: 4485746.5000
Epoch 73/100	1s 685us/step - loss: 2725253.0000
Epoch 74/100	15 005us/step - toss: 2/25253.0000
	1s 687us/step - loss: 1840121.3750
Epoch 75/100	
1465/1465	1s 681us/step - loss: 2033087.0000
Epoch 76/100	
	1s 680us/step - loss: 6888164.0000
Epoch 77/100	1- 600/
Epoch 78/100	1s 689us/step - loss: 5234385.5000
	1s 672us/step - loss: 2903440.0000
Epoch 79/100	23 07243,300
•	1s 683us/step - loss: 4618357.0000
Epoch 80/100	
	1s 686us/step - loss: 4109757.5000
Epoch 81/100	
	1s 689us/step - loss: 4643902.0000
Epoch 82/100	1s 703us/step - loss: 1500675.7500
Epoch 83/100	15 /03d3/5tep - t055: 13000/3:/300
	1s 687us/step - loss: 6361220.5000
Epoch 84/100	
	1s 688us/step - loss: 5439733.5000
Epoch 85/100	
	1s 688us/step - loss: 3063264.2500
Epoch 86/100	
1405/1405	1s 686us/step - loss: 3139500.7500

```
Epoch 87/100
1465/1465 -
                           —— 1s 682us/step - loss: 1817052.6250
Epoch 88/100
1465/1465 -
                              - 1s 684us/step - loss: 2966921.0000
Epoch 89/100
                             - 1s 685us/step - loss: 1478849.2500
1465/1465 -
Epoch 90/100
1465/1465 -
                             - 1s 682us/step - loss: 3650264.7500
Epoch 91/100
1465/1465 -
                              - 1s 694us/step - loss: 1500460.5000
Epoch 92/100
1465/1465 -
                             - 1s 684us/step - loss: 2563753.0000
Epoch 93/100
1465/1465 -
                             - 1s 682us/step - loss: 3110813.5000
Epoch 94/100
1465/1465 -
                             - 1s 686us/step - loss: 3423139.5000
Epoch 95/100
1465/1465 -
                            - 1s 683us/step - loss: 3981216.2500
Epoch 96/100
1465/1465 -
                             - 1s 683us/step - loss: 3217226.7500
Epoch 97/100
1465/1465 -
                             - 1s 687us/step - loss: 4115761.7500
Epoch 98/100
1465/1465 -
                           1s 694us/step - loss: 2242688.2500
Epoch 99/100
1465/1465 -
                           1s 690us/step - loss: 2575280.7500
Epoch 100/100
1465/1465 —
                           1s 685us/step - loss: 2576003.5000
733/733 —
                           - 1s 678us/step
Epoch 1/50
```

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2930/2930 -
                           3s 690us/step - loss: 13751500.0000
Epoch 2/50
2930/2930 -
                            — 2s 691us/step - loss: 2848147.2500
Epoch 3/50
2930/2930 -
                          2s 692us/step - loss: 4547703.5000
Epoch 4/50
2930/2930 -
                             - 2s 698us/step - loss: 2943259.7500
Epoch 5/50
2930/2930 -
                          2s 699us/step - loss: 5389090.5000
Epoch 6/50
2930/2930 -
                             - 2s 701us/step - loss: 4057264.0000
```

Enoch 7/50				
Epoch 7/50 2930/2930 ————————————————————————————————————	25	694us/sten –	lossi	3145823.2500
Epoch 8/50		054d5/5ccp	(0551	314302312300
2930/2930 —————	2s	693us/step -	loss:	3355077.5000
Epoch 9/50		·		
2930/2930 —————	2s	690us/step -	loss:	5020206.5000
Epoch 10/50				
2930/2930 —	2s	712us/step –	loss:	5456999.0000
Epoch 11/50	2-	706/atan	1	2040044 2500
2930/2930 — Epoch 12/50	25	/wous/step -	toss:	3049044.2300
2930/2930 ————	25	693us/sten -	loss:	4300615.0000
Epoch 13/50		033d3/3ccp		130001310000
2930/2930 ——————	2s	694us/step -	loss:	1898121.2500
Epoch 14/50				
2930/2930 —————	2s	692us/step -	loss:	9133060.0000
Epoch 15/50	_			
2930/2930 ————————————————————————————————————	2s	/11us/step -	loss:	185018/.6250
Epoch 16/50 2930/2930 ————————————————————————————————————	25	602us/sten -	1000	2/15/19/11 0000
Epoch 17/50	23	092u3/31cp	(033.	243434110000
2930/2930 ————	2s	686us/step -	loss:	4622494.0000
Epoch 18/50		·		
2930/2930 —————	2s	684us/step -	loss:	4261482.5000
Epoch 19/50	_		_	
2930/2930 ————————————————————————————————————	2s	689us/step -	loss:	2416365.7500
Epoch 20/50 2930/2930 ————————————————————————————————————	20	601us/stan	10001	1012422 7500
Epoch 21/50	25	091us/step -	1055:	1912432.7300
2930/2930 ————	2s	686us/step -	loss:	5131226,0000
Epoch 22/50		, , , , , , , , ,		
2930/2930 ——————	2s	687us/step -	loss:	4372931.0000
Epoch 23/50				
2930/2930 —————	2s	689us/step -	loss:	2497668.7500
Epoch 24/50	2-	602/atan	1	2152421 0000
2930/2930 ————————————————————————————————————	25	682uS/Step -	toss:	2152431.0000
2930/2930 ————	2s	687us/step -	loss:	3178750.0000
Epoch 26/50		00, 43, 5 (6)		31,0,3010000
2930/2930 —————	2s	681us/step -	loss:	4649040.5000
Epoch 27/50				
2930/2930 —————	2s	687us/step -	loss:	2221132.0000
Epoch 28/50	_	605 ()	-	2222542 7522
2930/2930 ————————————————————————————————————	25	ხანსs/step −	loss:	2099548./500
Epoch 29/50 2930/2930 ————————————————————————————————————	25	689115/sten -	1000	3/13/8511 75/0/0
Epoch 30/50	23	оозиз/з сер —	.033.	24202III/200
2930/2930 ————	2s	684us/step -	loss:	5260037.5000
Epoch 31/50	_	, 1-		
2930/2930 —————	2s	690us/step -	loss:	1201257.8750

```
Epoch 32/50
                         2s 688us/step - loss: 2527995.0000
2930/2930 -
Epoch 33/50
2930/2930 -
                           — 2s 686us/step - loss: 2936910.0000
Epoch 34/50
                            - 2s 688us/step - loss: 5238965.5000
2930/2930 -
Epoch 35/50
2930/2930 -
                            - 2s 682us/step - loss: 6445426.5000
Epoch 36/50
2930/2930 -
                             - 2s 683us/step - loss: 3848929.5000
Epoch 37/50
2930/2930 -
                          2s 693us/step - loss: 1531325.3750
Epoch 38/50
2930/2930 -
                           — 2s 689us/step - loss: 3018251.0000
Epoch 39/50
2930/2930 -
                            - 2s 678us/step - loss: 2543098.7500
Epoch 40/50
2930/2930 -
                          2s 693us/step - loss: 1502604.3750
Epoch 41/50
2930/2930 -
                            - 2s 685us/step - loss: 3612630.7500
Epoch 42/50
2930/2930 -
                           — 2s 685us/step - loss: 3038052.2500
Epoch 43/50
2930/2930 -
                          2s 677us/step - loss: 3485494.7500
Epoch 44/50
2930/2930 -
                          2s 681us/step - loss: 2098330.2500
Epoch 45/50
2930/2930 —
                          2s 672us/step - loss: 4383802.5000
Epoch 46/50
2930/2930 -
                             - 2s 672us/step - loss: 3775545.7500
Epoch 47/50
2930/2930 -
                         2s 688us/step - loss: 3251044.5000
Epoch 48/50
2930/2930 -
                            - 2s 675us/step - loss: 4209625.0000
Epoch 49/50
2930/2930 -
                           — 2s 678us/step - loss: 1267738.6250
Epoch 50/50
2930/2930 -
                            - 2s 676us/step - loss: 2692845.0000
                      1s 650us/step
1465/1465 -
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

2930/2930 — **3s** 675us/step - loss: 7733771.5000

Epoch 2/50				
2930/2930 ————	25	674us/sten –	1055	1729442 3750
Epoch 3/50		074d3/3ccp	(0551	172544215750
2930/2930 ————	2s	683us/step -	loss:	1351514,7500
Epoch 4/50				
2930/2930 —————	2s	669us/step -	loss:	1232101.6250
Epoch 5/50				
2930/2930 ——————	2s	680us/step -	loss:	1076708.6250
Epoch 6/50				
2930/2930 —————	2s	681us/step -	loss:	1098925.5000
Epoch 7/50	_	677 / .	-	4040405 5005
2930/2930 ————————————————————————————————————	2s	6//us/step -	loss:	1040125.5625
Epoch 8/50 2930/2930 ————————————————————————————————————	20	670us/stan	10001	1224605 2500
Epoch 9/50	25	6/9us/step -	1055:	1224095.2500
2930/2930 ————	25	672us/sten -	1055	1057800_2500
Epoch 10/50		072d373tcp	(0551	103700012300
2930/2930 ————	2s	672us/step -	loss:	1085738.1250
Epoch 11/50				
2930/2930 —————	2s	663us/step -	loss:	1067501.5000
Epoch 12/50				
2930/2930 ————	2s	687us/step -	loss:	1038998.9375
Epoch 13/50	2 -	CO2 / - t	1	1044770 2500
2930/2930 — Epoch 14/50	25	683us/step -	LOSS:	1044//8.2500
2930/2930 —————	25	675us/sten -	1055	1049214 5000
Epoch 15/50	23	073u373tcp	(033.	104521415000
2930/2930 ————	2s	682us/step -	loss:	1095887.0000
Epoch 16/50		•		
2930/2930 —————	2s	677us/step -	loss:	1108701.1250
Epoch 17/50				
2930/2930 ————	2s	663us/step -	loss:	1134421.1250
Epoch 18/50 2930/2930 ————————————————————————————————————	2.	657us/s+an	10001	1001221 0275
Epoch 19/50	25	os/us/step -	1055	1001231.9373
2930/2930 ————	2s	657us/step -	loss:	1136580.3750
Epoch 20/50		00.00,010	10001	
2930/2930 —————	2s	651us/step -	loss:	1017368.9375
Epoch 21/50				
2930/2930 —————	2s	690us/step -	loss:	1009289.1875
Epoch 22/50			_	
2930/2930 ————————————————————————————————————	2s	705us/step -	loss:	1029601.9375
Epoch 23/50	2-	702/atan	1	077057 2500
2930/2930 — Epoch 24/50	2 S	/wzus/step -	LOSS:	9//03/.2500
2930/2930 ————	25	722us/sten -	1055	1032634 6875
Epoch 25/50	_3	. 2243, 3 CCP		100/100/1
2930/2930 ————	2s	681us/step -	loss:	1014147.5000
Epoch 26/50				
2930/2930 —————	2s	738us/step -	loss:	1076163.0000

Enach 27/50				
Epoch 27/50 2930/2930 ————————————————————————————————————	2¢	728us/sten -	1000	067230 8125
Epoch 28/50	23	72003/31CP	(033.	30723010123
2930/2930 ————	2s	693us/step -	loss:	1000429.1250
Epoch 29/50		•		
2930/2930 ——————	2s	692us/step -	loss:	986649.1250
Epoch 30/50				
2930/2930 —————	2s	689us/step -	loss:	1042812.3125
Epoch 31/50	_		_	
2930/2930 ————————————————————————————————————	2s	689us/step -	loss:	1006292.1250
Epoch 32/50 2930/2930 ————————————————————————————————————	2.	601us/stan	10001	1026227 2750
Epoch 33/50	25	ogius/step -	1055:	102033/.3/30
2930/2930 ————	25	685us/sten -	1000	1011571 6250
Epoch 34/50	23	003и3/ 3 сер	(033.	10113/110230
2930/2930 —————	2s	727us/step -	loss:	1021712.6875
Epoch 35/50				
2930/2930 ——————	2s	687us/step -	loss:	1087713.1250
Epoch 36/50				
2930/2930 ————	2s	686us/step -	loss:	1141458.7500
Epoch 37/50	2-	CO 4 / a + a	1	1002021 7500
2930/2930 — Epoch 38/50	25	684us/step -	LOSS:	1083931.7500
2930/2930 ————	25	682us/sten –	lossi	985259.0625
Epoch 39/50		00243/3100	(0551	30323310023
2930/2930 —————	2s	684us/step -	loss:	1025871.5000
Epoch 40/50				
2930/2930 ——————	2s	680us/step -	loss:	1014266.9375
Epoch 41/50	_		_	
2930/2930 ————————————————————————————————————	2s	681us/step -	loss:	1007861.0625
Epoch 42/50 2930/2930 ————————————————————————————————————	20	601us/stop	10001	001010 0000
Epoch 43/50	25	ogius/step -	1055.	904040.0000
2930/2930 ————	2s	683us/step -	loss:	967604.9375
Epoch 44/50		,		
2930/2930 ——————	2s	693us/step -	loss:	990966.5000
Epoch 45/50				
2930/2930 ————	2s	673us/step -	loss:	965407.6875
Epoch 46/50	2-	602/atan	1	002261 0625
2930/2930 ————————————————————————————————————	25	oszus/step –	toss:	982201.0025
2930/2930 ————	25	676us/sten -	loss:	1055373.2500
Epoch 48/50		0,003,310		103337312300
2930/2930 ————	2s	678us/step -	loss:	1002380.0625
Epoch 49/50				
2930/2930 —————	2s	668us/step -	loss:	1065884.3750
Epoch 50/50	_		_	
2930/2930 ————————————————————————————————————	2s	674us/step -	loss:	986076.9375
1465/1465 ————————————————————————————————————	TS	ნეგია/step		
Epoch 1/50				

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super(). init (activity_regularizer=activity_regularizer, **kwargs)

•	_(activity_r	_					_
2930/2930 —	 	– 3s	675us/step	-	loss:	11636341	.0000
Epoch 2/50							
2930/2930 —		– 2s	667us/step) –	loss:	5042725.	0000
Epoch 3/50							
2930/2930 —	 	– 2s	688us/step	–	loss:	6921962.	0000
Epoch 4/50							
2930/2930 —	 	– 2s	683us/step	· –	loss:	5222675.	0000
Epoch 5/50							
2930/2930 —		– 2s	675us/step	· –	loss:	1430485.	2500
Epoch 6/50		_	674 ()		-	2722422	
2930/2930 —		– 2s	6/lus/step) —	loss:	2/38102.	0000
Epoch 7/50		2-	CEQ / a + a =		1	2021172	7500
2930/2930 —		– 25	650us/step) —	LOSS:	30211/2.	7500
Epoch 8/50 2930/2930 —		20	647us/ston		10001	//12211	2000
Epoch 9/50		- 25	04/us/step	, –	1055.	4413311	9000
2930/2930 —		- 2s	666us/sten		1055	1014220	5000
Epoch 10/50			00003/3100	,		13172231	,000
2930/2930 —		– 2s	656us/step) —	loss:	2701260.	7500
Epoch 11/50			00000,000		10001	_,	
2930/2930 —		– 2s	681us/step	, <u> </u>	loss:	4405674.	5000
Epoch 12/50			, ,				
2930/2930 —		– 2s	667us/step	-	loss:	6854943.	5000
Epoch 13/50							
2930/2930 —	 	– 2s	677us/step	–	loss:	2927285.	0000
Epoch 14/50							
2930/2930 —		– 2s	669us/step	· –	loss:	1184330.	5000
Epoch 15/50							
2930/2930 —		– 2s	675us/step	· –	loss:	2568252.	3000
Epoch 16/50		_	660 ()		-	25.40.460	
2930/2930 —		– 2s	668us/step	· –	loss:	2548469.	5000
Epoch 17/50		2-	CEO / a + a =		1	4422202	-000
2930/2930 —		– 25	659us/step) –	LOSS:	4422292.	טטטכ
Epoch 18/50		2.	601		10001	2117557	2500
2930/2930 — Epoch 19/50		_ 25	oolus/step	, –	10551	211/33/	2300
2930/2930 —		_ 2c	678us/sten		1000	20/12727	2000
Epoch 20/50		_ 23	0/003/3tep	, –	.033.	2072/2/1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
2930/2930 —		- 2c	686us/sten	. –	1055:	5232243	5000
Epoch 21/50		23	55543/3 CCp	,	.0551	323227JI.	,,,,,
2930/2930 —		– 2s	682us/sten	. –	loss:	5820463	2000
			, c p				

Enach 22/50					
Epoch 22/50 2930/2930 ————————————————————————————————————	2¢	688us/sten -		1000	2075607 2500
Epoch 23/50	23	000u3/31ep =		.033.	29/300/12300
2930/2930 ————	2s	662us/step -	_	loss:	8281036.5000
Epoch 24/50					
2930/2930 —————	2s	666us/step -		loss:	2430895.5000
Epoch 25/50					
2930/2930 —————	2s	685us/step -	- '	loss:	1462661.3750
Epoch 26/50					
2930/2930 —————	2s	670us/step -	- '	loss:	5353595.5000
Epoch 27/50					2755650 5000
2930/2930 ————————————————————————————————————	25	664us/step -	-	loss:	2/55659.5000
Epoch 28/50 2930/2930 ————————————————————————————————————	20	671us /s+op		10001	2404210 2500
Epoch 29/50	25	o/lus/step -	-	10551	2404210.2300
2930/2930 ————	25	661us/step -	_	loss:	3191636.2500
Epoch 30/50		001u0, 010p			
2930/2930 —————	2s	676us/step -	_	loss:	2059462.1250
Epoch 31/50					
2930/2930 —————	2s	661us/step -	- '	loss:	4625482.0000
Epoch 32/50	_				
2930/2930 ————————————————————————————————————	25	6/5us/step -	-	loss:	5891192.0000
Epoch 33/50 2930/2930 ————————————————————————————————————	26	671us/sten -		1000	107/263 6250
Epoch 34/50	23	0/1u3/3(ep =		.033.	197420310230
2930/2930 ————	2s	679us/step -		loss:	2371172.0000
Epoch 35/50		•			
2930/2930 ——————	2s	652us/step -	- '	loss:	3053412.0000
Epoch 36/50					
2930/2930 —————	2s	675us/step -	- '	loss:	1158007.8750
Epoch 37/50	20	60246/6+05		10001	2077576 2500
2930/2930 — Epoch 38/50	25	oozus/step -	-	10551	2977370.2300
2930/2930 ————	2s	658us/step -		loss:	4591080.0000
Epoch 39/50					
2930/2930 ——————	2s	674us/step -	- '	loss:	4468785.0000
Epoch 40/50					
2930/2930 ————	2s	659us/step -	- '	loss:	2746197.0000
Epoch 41/50	2-	674		1	1540004 2750
2930/2930 — Epoch 42/50	25	6/4us/step -	-	LOSS:	1549984.3750
2930/2930 ————	25	674us/sten -		lossi	1641326.0000
Epoch 43/50		074u373ccp		.0551	104132010000
2930/2930 ————	2s	663us/step -		loss:	1485702.6250
Epoch 44/50					
2930/2930 —————	2s	675us/step -	- '	loss:	3155678.0000
Epoch 45/50	_			_	
2930/2930 —————	2s	674us/step -	- '	loss:	1315337.0000
Epoch 46/50 2930/2930 ————————————————————————————————————	2-	672112/2+22		1000	1002055 0000
Z93U/Z93U	25	o/Zus/step -	-	1055	TQQQADQ. MMMM

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                       2s 776us/step - loss: 7195631.0000
Epoch 2/75
1465/1465 -
                          1s 783us/step - loss: 4669983.0000
Epoch 3/75
1465/1465 -
                           — 1s 750us/step - loss: 4062193.5000
Epoch 4/75
1465/1465 -
                            - 1s 694us/step - loss: 4963295.5000
Epoch 5/75
1465/1465 -
                             - 1s 781us/step - loss: 9601939.0000
Epoch 6/75
1465/1465 -
                            — 1s 689us/step - loss: 2045188.5000
Epoch 7/75
                          1s 772us/step - loss: 1291780.6250
1465/1465 -
Epoch 8/75
1465/1465 -
                             - 1s 712us/step - loss: 1999569.7500
Epoch 9/75
                             - 1s 790us/step - loss: 2687437.5000
1465/1465 -
Epoch 10/75
                            - 1s 788us/step - loss: 2348426.0000
1465/1465 -
Epoch 11/75
1465/1465 -
                             - 1s 763us/step - loss: 6618338.5000
Epoch 12/75
1465/1465 -
                             - 1s 756us/step - loss: 2501287.7500
Epoch 13/75
1465/1465 -
                          1s 783us/step - loss: 2950000.2500
Epoch 14/75
1465/1465 -
                             - 1s 704us/step - loss: 5308311.0000
Epoch 15/75
                           1s 783us/step - loss: 2696432.7500
1465/1465 -
Epoch 16/75
1465/1465 -
                             - 1s 758us/step - loss: 2282793.2500
```

F	
Epoch 17/75	- 1s 781us/step - loss: 2968573.2500
Epoch 18/75	— 13 /01α3/3τερ το33: 23003/3:2300
	- 1s 752us/step - loss: 6617689.5000
Epoch 19/75	
	- 1s 758us/step - loss: 4370811.5000
Epoch 20/75	·
1465/1465	- 1s 723us/step - loss: 5627281.5000
Epoch 21/75	
	- 1s 767us/step - loss: 11182986.0000
Epoch 22/75	
	- 1s 760us/step - loss: 1554830.2500
Epoch 23/75	1- 725/ 1 2252000 5000
	- 1s 725us/step - loss: 3352988.5000
Epoch 24/75	- 1s 751us/step - loss: 2333743.5000
Epoch 25/75	- 15 /31u3/3tep - t033: 2333/43:3000
	- 1s 725us/step - loss: 3072360.0000
Epoch 26/75	
1465/1465	- 1s 745us/step - loss: 2393755.5000
Epoch 27/75	
1465/1465 ———————	- 1s 744us/step - loss: 2522011.2500
Epoch 28/75	
	- 1s 742us/step - loss: 1991557.0000
Epoch 29/75	. 705 / /
	- 1s 795us/step - loss: 2636338.0000
Epoch 30/75	- 1s 741us/step - loss: 2129906.7500
Epoch 31/75	- 15 /41us/step - toss: 2129900./300
	- 1s 747us/step - loss: 2987682.0000
Epoch 32/75	23 / 1/43/3 ccp
	- 1s 759us/step - loss: 3626176.0000
Epoch 33/75	
1465/1465	- 1s 776us/step - loss: 1680026.2500
Epoch 34/75	
	- 1s 799us/step - loss: 2655227.5000
Epoch 35/75	4 706 / 1 2422404 0000
	- 1s 796us/step - loss: 2133101.0000
Epoch 36/75	- 1s 783us/step - loss: 2325611.0000
Epoch 37/75	- 15 /63us/step - toss: 2323011.0000
	- 1s 802us/step - loss: 2183110.7500
Epoch 38/75	13 00243/31cp (033) 21031101/300
	- 1s 777us/step - loss: 3076718.2500
Epoch 39/75	. ,
	- 1s 782us/step - loss: 2512034.0000
Epoch 40/75	
	- 1s 792us/step - loss: 1903070.8750
Epoch 41/75	
1465/1465 —————————	- 1s 786us/step - loss: 5469496.0000

Epoch 42/75	
	1s 788us/step - loss: 1740152.8750
Epoch 43/75	23 / OOd3/ Step 10331 1/4013210/30
	1s 751us/step - loss: 1586981.7500
Epoch 44/75	
	1s 733us/step - loss: 2003101.5000
Epoch 45/75	·
1465/1465 ————————————————————————————————————	1s 789us/step - loss: 2240674.2500
Epoch 46/75	
	1s 783us/step - loss: 3184577.0000
Epoch 47/75	
	1s 793us/step - loss: 3571778.7500
Epoch 48/75	1- 700/ 1 2075/24 2500
	1s 789us/step - loss: 3075421.2500
Epoch 49/75	1s 748us/step - loss: 1995739.6250
Epoch 50/75	15 /48d5/Step = t055. 1995/59:0250
	1s 744us/step - loss: 5403979.0000
Epoch 51/75	25 / Has, step 10331 31033/310000
	1s 788us/step - loss: 1546523.6250
Epoch 52/75	· '
1465/1465	1s 747us/step - loss: 4492099.5000
Epoch 53/75	
	1s 768us/step - loss: 1777261.8750
Epoch 54/75	
	1s 780us/step - loss: 2426455.7500
Epoch 55/75	
	1s 797us/step - loss: 3380343.7500
Epoch 56/75	1s 775us/step - loss: 1926208.3750
Epoch 57/75	15 //bus/step = toss: 1920200.5/50
·	1s 792us/step - loss: 2246171.2500
Epoch 58/75	13 / 32 d 3 / 3 c c p
1465/1465	1s 783us/step - loss: 6774718.0000
Epoch 59/75	•
1465/1465 ———————	1s 799us/step - loss: 2730156.7500
Epoch 60/75	
	1s 824us/step - loss: 3618566.5000
Epoch 61/75	
	1s 794us/step - loss: 2035080.6250
Epoch 62/75	1- 700/ 1 1702760 1250
	1s 789us/step - loss: 1703760.1250
Epoch 63/75	1s 802us/step - loss: 2959841.5000
Epoch 64/75	- 13 00203/31Cp - 1033. 2333041:3000
	1s 772us/step - loss: 3882198.0000
Epoch 65/75	
	1s 719us/step - loss: 1268941.0000
Epoch 66/75	
	1s 780us/step - loss: 2527001.2500

```
Epoch 67/75
1465/1465 -
                          ---- 1s 780us/step - loss: 2559370.2500
Epoch 68/75
1465/1465 -
                             - 1s 732us/step - loss: 3449987.0000
Epoch 69/75
                             - 1s 782us/step - loss: 3902581.2500
1465/1465 -
Epoch 70/75
1465/1465 -
                             - 1s 783us/step - loss: 6057199.5000
Epoch 71/75
1465/1465 -
                             - 1s 774us/step - loss: 3019045.5000
Epoch 72/75
1465/1465 -
                           1s 784us/step - loss: 3008593.7500
Epoch 73/75
1465/1465 -
                            - 1s 785us/step - loss: 2601010.7500
Epoch 74/75
1465/1465 -
                             - 1s 779us/step - loss: 2028424.7500
Epoch 75/75
1465/1465 -
                          1s 790us/step - loss: 1144354.1250
733/733 —
                        1s 669us/step
Epoch 1/75
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2s 766us/step - loss: 3769862.5000
1465/1465 —
Epoch 2/75
                           — 1s 776us/step - loss: 1090750.6250
1465/1465 -
Epoch 3/75
1465/1465 -
                             - 1s 755us/step - loss: 1033252.3750
Epoch 4/75
                             - 1s 793us/step - loss: 1100317.8750
1465/1465 -
Epoch 5/75
                            - 1s 796us/step - loss: 1057205.3750
1465/1465 -
Epoch 6/75
1465/1465 -
                             - 1s 778us/step - loss: 1003251.3125
Epoch 7/75
1465/1465 -
                             - 1s 793us/step - loss: 1035994.6250
Epoch 8/75
1465/1465 -
                           1s 994us/step - loss: 1088933.7500
Epoch 9/75
1465/1465 -
                             - 1s 806us/step - loss: 1039439.0000
Epoch 10/75
1465/1465 -
                            — 1s 804us/step - loss: 1001386.6250
Epoch 11/75
1465/1465 -
                             - 1s 803us/step - loss: 939643.7500
```

- L 40 (75				
Epoch 12/75 1465/1465 ————————————————————————————————————	1 c	706us/sten -	1000	1106/15/1 3750
Epoch 13/75	13	/9003/31CP -	1033.	119045415750
1465/1465	1 s	776us/step -	loss:	1083965.6250
Epoch 14/75				
1465/1465	1 s	753us/step -	loss:	946423.5625
Epoch 15/75				
1465/1465 ————————————————————————————————————	1 s	767us/step –	loss:	1024464.3750
Epoch 16/75		750 / 1		000010 0105
1465/1465 ————————————————————————————————————	IS	/53us/step -	loss:	989918.8125
Epoch 17/75 1465/1465 ————————————————————————————————————	1 c	801us/sten -	1000	080100 6250
Epoch 18/75	13	001u3/3tep -	1033.	90019010230
1465/1465 ——————	1s	804us/step -	loss:	1014607.4375
Epoch 19/75	_	, , , , , , , , , , , , , , , , , , ,		
1465/1465 ———————	1 s	804us/step -	loss:	973222.4375
Epoch 20/75				
1465/1465 ———————	1 s	798us/step -	loss:	1057413.7500
Epoch 21/75	_		-	
1465/1465 ————————————————————————————————————	1s	807us/step -	loss:	1051170.2500
Epoch 22/75 1465/1465 ————————————————————————————————————	1.	707us/ston	10001	1105206 6250
Epoch 23/75	12	/9/us/step -	10551	1195500.0250
1465/1465 ————	1s	785us/sten -	loss:	971805.3750
Epoch 24/75		, 03 d3, 3 cop		3,100313,00
1465/1465	1 s	794us/step -	loss:	1005991.9375
Epoch 25/75				
1465/1465 ——————	1 s	799us/step -	loss:	1021455.3125
Epoch 26/75	_		_	
1465/1465	1 s	790us/step -	loss:	956170.8750
Epoch 27/75 1465/1465 ————————————————————————————————————	1.	750us /stop	10001	1000270 0000
Epoch 28/75	12	/39us/step =	10551	10993/9.0000
1465/1465 ————	1s	753us/step -	loss:	1059198.3750
Epoch 29/75		, 55 dis, 5 cop		
1465/1465 ——————	1 s	744us/step -	loss:	1123067.1250
Epoch 30/75				
1465/1465 ————————	1 s	767us/step -	loss:	1087736.3750
Epoch 31/75	_			
1465/1465 ————————————————————————————————————	1s	/66us/step -	loss:	1042581.43/5
Epoch 32/75 1465/1465 ————————————————————————————————————	1.0	601us /stop	10001	1016740 4275
Epoch 33/75	13	09103/316b -	1055.	1010740.4373
1465/1465 —————	1s	753us/sten -	loss:	1135125.5000
Epoch 34/75		, 55 d5, 5 t6p		113312313000
1465/1465	1 s	795us/step -	loss:	1000926.4375
Epoch 35/75		•		
1465/1465 ——————	1 s	769us/step -	loss:	1088478.8750
Epoch 36/75	_		-	
1465/1465 —————————	1 s	804us/step -	loss:	976951.4375

Enach 27/75					
Epoch 37/75 1465/1465 ————————————————————————————————————	1 c	770us/sten -	_	1000	036765 0375
Epoch 38/75	13	770u3/3ccp			33070313373
1465/1465	1 s	768us/step -	_	loss:	1040399.6875
Epoch 39/75		-			
1465/1465	1 s	764us/step -	_	loss:	976248.4375
Epoch 40/75					
1465/1465 ——————	1 s	767us/step -	-	loss:	1073079.5000
Epoch 41/75					
1465/1465 ————————————————————————————————————	1 s	778us/step -	-	loss:	1000525.1250
Epoch 42/75	1 -	770 / - 1		7	1005516 0750
1465/1465 ————————————————————————————————————	IS	//8us/step -	_	LOSS:	1005510.8750
Epoch 43/75 1465/1465 ————————————————————————————————————	1.	79746/6+00		10001	1020541 7500
Epoch 44/75	12	707us/step -	_	1055.	1029341.7300
1465/1465 —————	1s	746us/sten -	_	loss:	1050137.0000
Epoch 45/75		, 1003, 3 ccp			103013710000
1465/1465	1s	807us/step -	_	loss:	967002.6250
Epoch 46/75					
1465/1465 ——————	1 s	795us/step -	-	loss:	1005794.0000
Epoch 47/75					
1465/1465 ———————	1 s	794us/step -	-	loss:	1035190.7500
Epoch 48/75				_	
1465/1465 ————————————————————————————————————	1s	802us/step -	-	loss:	1038285.8750
Epoch 49/75	1.	777 / a.t. a.m		1	000000 6050
1465/1465 — Epoch 50/75	ıs	///us/step -	_	LOSS:	980829.0250
1465/1465 ————	1 c	700us/sten -		1000	1030137 9125
Epoch 51/75	13	79903/3CCp			103913710123
1465/1465 —————	1s	863us/step -	_	loss:	1016286.1250
Epoch 52/75					
1465/1465 ——————	1 s	823us/step -	_	loss:	992398.5625
Epoch 53/75					
1465/1465 ——————	1 s	822us/step -	-	loss:	961487.1875
Epoch 54/75	_			_	
1465/1465 ————————————————————————————————————	1s	/91us/step -	-	loss:	9549/6.3125
Epoch 55/75 1465/1465 ————————————————————————————————————	1.0	706us /stop		10001	1060611 0750
Epoch 56/75	12	/90us/step -		1055.	1009011.0730
1465/1465 —————	1s	822us/sten -	_	loss:	959891 - 6250
Epoch 57/75		02243, 3 ccp			33303110230
1465/1465 —————	1s	820us/step -	_	loss:	957651.8750
Epoch 58/75		·			
1465/1465 ————————	1 s	843us/step -	-	loss:	975670.1250
Epoch 59/75					
1465/1465 ————————	1 s	828us/step -	-	loss:	973174.5625
Epoch 60/75	_	770		-	400400=
1465/1465 ————————————————————————————————————	1 s	//3us/step -	-	loss:	1031905.0625
Epoch 61/75	1 -	76640 / 2 + 2 =		1000	007076 2750
1465/1465 ———————	TS	/oous/step -	_	LOSS:	99/8/0.3/50

```
Epoch 62/75
1465/1465 -
                         1s 788us/step - loss: 1039885.4375
Epoch 63/75
1465/1465 -
                            - 1s 832us/step - loss: 999622.7500
Epoch 64/75
                            - 1s 806us/step - loss: 945818.6875
1465/1465 -
Epoch 65/75
1465/1465 -
                            - 1s 774us/step - loss: 1047621.7500
Epoch 66/75
1465/1465 -
                            - 1s 762us/step - loss: 1014150.0625
Epoch 67/75
1465/1465 -
                          1s 794us/step - loss: 1081121.6250
Epoch 68/75
1465/1465 -
                           — 1s 781us/step - loss: 969099.3125
Epoch 69/75
1465/1465 -
                           - 1s 756us/step - loss: 1085277.7500
Epoch 70/75
1465/1465 -
                          1s 798us/step - loss: 970844.0625
Epoch 71/75
1465/1465 -
                            - 1s 777us/step - loss: 981603.0625
Epoch 72/75
1465/1465 -
                          — 1s 972us/step - loss: 957342.2500
Epoch 73/75
1465/1465 -
                         1s 813us/step - loss: 966197.1250
Epoch 74/75
1465/1465 -
                        1s 753us/step - loss: 1041717.9375
Epoch 75/75
1465/1465 —
                         1s 797us/step - loss: 979181.0625
                   1s 756us/step
733/733 —
Epoch 1/75
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                         2s 824us/step - loss: 6698049.5000
Epoch 2/75
1465/1465 -
                          1s 815us/step - loss: 3807826.5000
Epoch 3/75
1465/1465 -
                         1s 834us/step - loss: 3794843.7500
Epoch 4/75
1465/1465 -
                            - 1s 788us/step - loss: 2067225.7500
Epoch 5/75
1465/1465 -
                         1s 818us/step - loss: 2646118.2500
Epoch 6/75
1465/1465 -
                            - 1s 821us/step - loss: 1985878.7500
```

Epoch 7/75					
1465/1465 ————	1 c	770us/sten	_	1000	2576562 2500
Epoch 8/75	13	7730373 CCP			257050212500
1465/1465 —————	1s	785us/step	_	loss:	10745668.0000
Epoch 9/75					
1465/1465 —————	1s	782us/step	_	loss:	1780256.2500
Epoch 10/75					
1465/1465	1 s	785us/step	_	loss:	5294866.5000
Epoch 11/75					
1465/1465 ——————	1 s	796us/step	-	loss:	2124837.5000
Epoch 12/75					
1465/1465 ————————————————————————————————————	1 s	775us/step	-	loss:	4495266.0000
Epoch 13/75	_	770 ()		-	222224
1465/1465 ————————————————————————————————————	15	//2us/step	-	loss:	3209814.0000
Epoch 14/75 1465/1465 ————————————————————————————————————	1.	90Eus /s+on		10001	6142070 5000
Epoch 15/75	12	ousus/step	_	1055	0142070.3000
1465/1465 ————	1 c	780us/sten	_	1055.	3062326 7500
Epoch 16/75	13	703u3/31cp			300232017300
1465/1465 —————	1s	839us/step	_	loss:	4894578,0000
Epoch 17/75					
1465/1465 ————————————————————————————————————	1 s	821us/step	_	loss:	4041936.5000
Epoch 18/75		·			
1465/1465	1 s	809us/step	-	loss:	2834926.7500
Epoch 19/75					
1465/1465 ——————	1 s	800us/step	-	loss:	5455878.0000
Epoch 20/75	_			_	
1465/1465 ————————————————————————————————————	1 s	799us/step	-	loss:	5431138.0000
Epoch 21/75	1.	774		1	2240602 0000
1465/1465 — Epoch 22/75	15	//4us/step	_	toss:	2248002.0000
1465/1465 ————	1 c	707us/sten	_	1000	5010387 5000
Epoch 23/75	13	797u3/3ccp		(033.	301930713000
1465/1465 ————————————————————————————————————	1s	772us/step	_	loss:	2596241,0000
Epoch 24/75		,			
1465/1465	1s	794us/step	_	loss:	1324349.3750
Epoch 25/75					
1465/1465 ——————	1 s	777us/step	-	loss:	2910810.5000
Epoch 26/75					
1465/1465	1 s	778us/step	-	loss:	1589136.6250
Epoch 27/75	_			-	24.450.46 7500
1465/1465	15	802us/step	-	loss:	2145946.7500
Epoch 28/75	1.	76000/0+00		1000	1102247 2750
1465/1465 — Epoch 29/75	12	/oous/step	_	coss:	119234/13/30
1465/1465 —————	1c	756115/sten	_	10661	1767892 7500
Epoch 30/75	13	, σουσ, στερ	-	.0331	110103211300
1465/1465 ————	1s	773us/sten	_	loss:	6525131.5000
Epoch 31/75					2222222000
1465/1465 ————————————————————————————————————	1s	785us/step	_	loss:	1628111.2500
•	_	,			

- L 22 (7F		
Epoch 32/75	1s 763us/step - loss: 2205171.250	n
Epoch 33/75	15 /03us/step - toss: 22031/1.230	U
	1s 831us/step - loss: 2830852.500	0
Epoch 34/75		
	1s 780us/step - loss: 6061590.500	0
Epoch 35/75		
	1s 795us/step - loss: 4257847.500	0
Epoch 36/75	3 040 / / 3 350000 000	
	1s 818us/step - loss: 3568980.000	V
Epoch 37/75	2s 1ms/step - loss: 2358410.0000	
Epoch 38/75	23 1m3/3 tcp (033: 2330+10:0000	
	1s 801us/step - loss: 7537681.000	0
Epoch 39/75		
1465/1465	1s 782us/step - loss: 4139518.000	0
Epoch 40/75		
	1s 737us/step - loss: 6524910.500	0
Epoch 41/75	1s 752us/step - loss: 1532722.375	
Epoch 42/75	15 /52us/step - toss: 1532/22.3/5	U
•	1s 785us/step - loss: 3811771.750	ıa
Epoch 43/75	23 / 03α3/ 3 το β το 331 / 3011/ 11/30	
	1s 777us/step - loss: 6620340.500	0
Epoch 44/75		
	1s 740us/step - loss: 4690139.500	0
Epoch 45/75		
	1s 729us/step - loss: 6128435.500	0
Epoch 46/75	1s 759us/step - loss: 3499238.500	n
Epoch 47/75	15 /J9d5/Step - t055. 3499230.300	U
•	1s 763us/step - loss: 1222619.125	0
Epoch 48/75		
1465/1465	1s 732us/step - loss: 2821771.750	0
Epoch 49/75		
	1s 729us/step - loss: 1573576.625	0
Epoch 50/75	1c 729us/ston loss, 2244011 500	0
Epoch 51/75	1s 728us/step - loss: 3244911.500	U
	1s 778us/step - loss: 1769777.750	10
Epoch 52/75	10 77 000, 0 00p	
•	1s 750us/step - loss: 1937959.000	0
Epoch 53/75		
	1s 757us/step - loss: 2533704.000	0
Epoch 54/75	1- 001/	
	1s 801us/step - loss: 1452722.500	V
Epoch 55/75	1s 774us/step - loss: 2368485.250	ı0
Epoch 56/75	13 //4u3/3tep - tu33. 2300403.230	U
	1s 765us/step - loss: 6311325.000	0
	10001 0001000	-

```
Epoch 57/75
                          1s 785us/step - loss: 2577928.7500
1465/1465 -
Epoch 58/75
1465/1465 -
                             - 1s 790us/step - loss: 2532677.7500
Epoch 59/75
                             - 1s 786us/step - loss: 2370684.7500
1465/1465 -
Epoch 60/75
1465/1465 -
                             - 1s 767us/step - loss: 1504928.2500
Epoch 61/75
1465/1465 -
                             - 1s 763us/step - loss: 1280582.8750
Epoch 62/75
1465/1465 -
                             - 1s 782us/step - loss: 3362412.7500
Epoch 63/75
1465/1465 -
                             - 1s 772us/step - loss: 3346304.0000
Epoch 64/75
1465/1465 -
                             - 1s 735us/step - loss: 1635806.5000
Epoch 65/75
1465/1465 -
                            — 1s 782us/step - loss: 4762579.5000
Epoch 66/75
1465/1465 -
                             - 1s 753us/step - loss: 6098822.0000
Epoch 67/75
1465/1465 -
                             - 1s 757us/step - loss: 3724852.2500
Epoch 68/75
1465/1465 -
                           1s 785us/step - loss: 2964622.0000
Epoch 69/75
1465/1465 -
                           1s 768us/step - loss: 4211000.5000
Epoch 70/75
1465/1465 -
                            - 1s 739us/step - loss: 3900964.0000
Epoch 71/75
1465/1465 -
                             - 1s 765us/step - loss: 1491380.5000
Epoch 72/75
                           — 1s 765us/step - loss: 4571782.0000
1465/1465 -
Epoch 73/75
1465/1465 -
                             - 1s 766us/step - loss: 8414855.0000
Epoch 74/75
1465/1465 -
                             - 1s 799us/step - loss: 2087706.8750
Epoch 75/75
1465/1465 —
                            - 1s 785us/step - loss: 5857198.5000
                       1s 722us/step
733/733 —
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build fn`` will raise an Error instead.

X, y = self._initialize(X, y)

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

1465/1465 — **2s** 684us/step - loss: 9574807.0000

Epoch 2/50 1465/1465 Is 644us/step - loss: 8091923.0 Epoch 3/50 Is 667us/step - loss: 5228416.0 1465/1465 Is 658us/step - loss: 5557477.5 Epoch 5/50 Is 650us/step - loss: 5172666.0 1465/1465 Is 700us/step - loss: 8129162.0 Epoch 7/50 Is 686us/step - loss: 3871824.7 Epoch 8/50 Is 685us/step - loss: 6023269.0 1465/1465 Is 685us/step - loss: 6023269.0 Epoch 9/50 Is 696us/step - loss: 1886566.7 Epoch 10/50 Is 696us/step - loss: 1886566.7	000 000 000 000 500
Epoch 3/50 1465/1465 1s 667us/step - loss: 5228416.0 Epoch 4/50 1465/1465 1s 658us/step - loss: 5557477.5 Epoch 5/50 1465/1465 1s 650us/step - loss: 5172666.0 Epoch 6/50 1465/1465 1s 700us/step - loss: 8129162.0 Epoch 7/50 1465/1465 1s 686us/step - loss: 3871824.7 Epoch 8/50 1465/1465 1s 685us/step - loss: 6023269.0 Epoch 9/50 1465/1465 1s 696us/step - loss: 1886566.7	000 000 000 000 500
1465/1465 1s 667us/step - loss: 5228416.0 Epoch 4/50 1s 658us/step - loss: 5557477.5 Epoch 5/50 1s 650us/step - loss: 5172666.0 Epoch 6/50 1s 700us/step - loss: 8129162.0 Epoch 7/50 1s 686us/step - loss: 3871824.7 Epoch 8/50 1s 685us/step - loss: 6023269.0 Epoch 9/50 1s 696us/step - loss: 1886566.7	000 000 000 500
Epoch 4/50 1465/1465	000 000 000 500
1465/1465 1s 658us/step - loss: 5557477.5 Epoch 5/50 1s 650us/step - loss: 5172666.0 Epoch 6/50 1s 700us/step - loss: 8129162.0 Epoch 7/50 1s 686us/step - loss: 3871824.7 Epoch 8/50 1s 685us/step - loss: 6023269.0 Epoch 9/50 1s 696us/step - loss: 1886566.7	000 000 500
Epoch 5/50 1465/1465	000 000 500
Epoch 6/50 1465/1465	000 500
1465/1465 1s 700us/step - loss: 8129162.0 Epoch 7/50 1s 686us/step - loss: 3871824.7 Epoch 8/50 1s 685us/step - loss: 6023269.0 Epoch 9/50 1s 696us/step - loss: 1886566.7	500
Epoch 7/50 1465/1465	500
1465/1465 1s 686us/step - loss: 3871824.7 Epoch 8/50 1s 685us/step - loss: 6023269.0 Epoch 9/50 1s 696us/step - loss: 1886566.7	
Epoch 8/50 1465/1465 — 1s 685us/step - loss: 6023269.0 Epoch 9/50 1465/1465 — 1s 696us/step - loss: 1886566.7	
1465/1465 — 1s 685us/step - loss: 6023269.0 Epoch 9/50 — 1s 696us/step - loss: 1886566.7	000
Epoch 9/50 1465/1465 — 1s 696us/step - loss: 1886566.7	טטט
1465/1465 — 1s 696us/step - loss: 1886566.7	
·	500
	200
1465/1465 — 1s 668us/step - loss: 2296236.5	000
Epoch 11/50	
1465/1465 — 1s 666us/step - loss: 2945357.2	500
Epoch 12/50	
1465/1465 — 1s 683us/step – loss: 2492706.0	000
Epoch 13/50	
1465/1465 — 1s 689us/step – loss: 4049431.2	500
Epoch 14/50	
1465/1465 — 1s 675us/step - loss: 2415732.2	500
Epoch 15/50	000
1465/1465 — 1s 691us/step - loss: 4271616.0 Epoch 16/50	טטט
1465/1465 — 1s 693us/step – loss: 1946186.3	750
Epoch 17/50	150
1465/1465 — 1s 687us/step – loss: 5977953.5	000
Epoch 18/50	
1465/1465 — 1s 694us/step - loss: 6823402.0	000
Epoch 19/50	
1465/1465 — 1s 703us/step – loss: 4716898.5	000
Epoch 20/50	000
1465/1465 — 1s 686us/step – loss: 3163350.5	טטט
Frank 31/F0	
Epoch 21/50	
1465/1465 — 1s 697us/step - loss: 2311719.0	
1465/1465 — 1s 697us/step - loss: 2311719.0 Epoch 22/50	000
1465/1465 — 1s 697us/step - loss: 2311719.0 Epoch 22/50 — 1s 684us/step - loss: 9143989.0	000
1465/1465 — 1s 697us/step - loss: 2311719.0 Epoch 22/50 1465/1465 — 1s 684us/step - loss: 9143989.0 Epoch 23/50	000 000
1465/1465 — 1s 697us/step - loss: 2311719.0 Epoch 22/50 — 1s 684us/step - loss: 9143989.0	000 000
1465/1465 Is 697us/step - loss: 2311719.0 Epoch 22/50 Is 684us/step - loss: 9143989.0 Epoch 23/50 Is 681us/step - loss: 3007942.2	000 000 500
1465/1465 Is 697us/step - loss: 2311719.0 Epoch 22/50 Is 684us/step - loss: 9143989.0 Epoch 23/50 Is 681us/step - loss: 3007942.2 Epoch 24/50 Is 701us/step - loss: 3770037.2 Epoch 25/50 Is 701us/step - loss: 3770037.2	000 000 500 500
1465/1465 1s 697us/step - loss: 2311719.0 Epoch 22/50 1465/1465 1s 684us/step - loss: 9143989.0 Epoch 23/50 1s 681us/step - loss: 3007942.2 Epoch 24/50 1s 701us/step - loss: 3770037.2 Epoch 25/50 1s 693us/step - loss: 7185459.5	000 000 500 500
1465/1465 Is 697us/step - loss: 2311719.0 Epoch 22/50 Is 684us/step - loss: 9143989.0 Epoch 23/50 Is 681us/step - loss: 3007942.2 Epoch 24/50 Is 701us/step - loss: 3770037.2 Epoch 25/50 Is 701us/step - loss: 3770037.2	000 000 500 500

Frank 27/50	
Epoch 27/50	1s 690us/step - loss: 2418380.5000
Epoch 28/50	13 03003/3tep - t033. 2410300.3000
	1s 693us/step - loss: 2018231.0000
Epoch 29/50	
	1s 685us/step - loss: 8716988.0000
Epoch 30/50	·
1465/1465 ————————	1s 691us/step - loss: 2879388.2500
Epoch 31/50	
	1s 695us/step - loss: 1835595.2500
Epoch 32/50	_
	1s 688us/step - loss: 3191826.5000
Epoch 33/50	4 700 / / 1 4400400 0770
	1s 703us/step - loss: 1190436.3750
Epoch 34/50	1. 701us/ston loss, 4402406 0000
Epoch 35/50	1s 701us/step - loss: 4493496.0000
	1s 698us/step - loss: 2652373.0000
Epoch 36/50	13 03003/3tep - t033. 20323/3.0000
1465/1465	1s 700us/step - loss: 2127134.5000
Epoch 37/50	
	1s 699us/step - loss: 4383775.0000
Epoch 38/50	
1465/1465	1s 688us/step - loss: 7117565.5000
Epoch 39/50	
	1s 692us/step - loss: 3074798.0000
Epoch 40/50	
	1s 699us/step - loss: 4501565.0000
Epoch 41/50	
	1s 697us/step - loss: 3597713.2500
Epoch 42/50	1s 689us/step - loss: 5255589.0000
Epoch 43/50	15 08905/5tep - t055: 5255589.0000
	1s 696us/step - loss: 5003156.5000
Epoch 44/50	23 03003/3ccp (033: 3003130:3000
	1s 690us/step - loss: 2853773.0000
Epoch 45/50	
	1s 693us/step - loss: 2812857.0000
Epoch 46/50	
1465/1465 ——————	1s 689us/step - loss: 2510156.2500
Epoch 47/50	
	1s 696us/step - loss: 3497243.5000
Epoch 48/50	
	1s 685us/step - loss: 5481895.5000
Epoch 49/50	1c 601uc/cton local 2727750 5000
Epoch 50/50	1s 681us/step - loss: 3737758.5000
	1s 697us/step - loss: 7607675.0000
733/733 — 1:	• 684us/sten
Epoch 1/50	3 00-ru3/3ccp
-p30:: 1/30	

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

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super(). init (activity_regularizer=activity_regularizer, **kwargs)

super()init(activity_re	gu L	arizer=activ	1t	y_regu	ılarızer,	**kwargs
1465/1465 —————	2s	698us/step	-	loss:	9174235.	0000
Epoch 2/50						
1465/1465 —————	1 s	691us/step	-	loss:	5791860.	0000
Epoch 3/50						
1465/1465 ——————	1 s	690us/step	-	loss:	2886838.	2500
Epoch 4/50						
1465/1465 —————	1 s	689us/step	-	loss:	1725449.	8750
Epoch 5/50						
1465/1465 ————	1 s	689us/step	-	loss:	1518444.	8750
Epoch 6/50	_	604		-	4.407056	0750
1465/1465	ls	684us/step	_	loss:	140/256	8/50
Epoch 7/50	1.	CO2 / a + a =		1	1204000	0750
1465/1465 ————————————————————————————————————	IS	692us/step	_	loss:	1284909.	8/50
Epoch 8/50 1465/1465	1.	605us /stop		1000	120/1002	0000
Epoch 9/50	12	093us/step	_	1055.	1204903	0000
1465/1465 ————	1 c	686us/sten	_	1055.	1201333	3750
Epoch 10/50	13	00003/3100			12313331	3730
1465/1465	1s	702us/step	_	loss:	1080220.	7500
Epoch 11/50		, 0 = 0.0, 0 = 0.0				
1465/1465 —————	1s	687us/step	_	loss:	1097503.	7500
Epoch 12/50		, ,				
1465/1465 ———————	1 s	687us/step	_	loss:	1136441.	0000
Epoch 13/50						
1465/1465	1 s	687us/step	-	loss:	1061079.	2500
Epoch 14/50						
1465/1465 —————	1 s	694us/step	-	loss:	1053026.	2500
Epoch 15/50						
1465/1465 ————————————————————————————————————	1 s	686us/step	-	loss:	1047858.	3750
Epoch 16/50	_			-	4.55.65	
1465/1465	1 s	680us/step	-	loss:	1058063.	3/50
Epoch 17/50	1.	COF / a + a =		1	1046153	C07F
1465/1465 ————————————————————————————————————	IS	695us/step	_	loss:	1046152.	08/5
Epoch 18/50	1.	60746/6+00		10001	1040727	2750
1465/1465 ————————————————————————————————————	15	66/us/step	_	1055;	1049/2/	3/30
1465/1465 ————	1 c	600115/sten	_	1066.	1035273	aaaa
Epoch 20/50	τ2	09903/31CP	_	.033.	TOSSOLSE	0000
1465/1465 ————	1s	693us/sten	_	1055:	1089231	7500
Epoch 21/50		03343/31ср		.055.	10032311	, 500
1465/1465 ————	1s	656us/sten	_	loss:	972558.1	875
/		55045/5сер		.0331	3,233011	0.5

Epoch 22/50					
1465/1465 —————	1 c	700us/sten -	_	1000	102253/ 3125
Epoch 23/50	13	700u3/31cp			102233413123
1465/1465 ————————————————————————————————————	1 s	692us/step -	_	loss:	1052375.2500
Epoch 24/50					
1465/1465	1 s	685us/step -	_	loss:	1032190.3125
Epoch 25/50					
1465/1465 ————————————————————————————————————	1 s	690us/step -	-	loss:	1086144.7500
Epoch 26/50					
1465/1465 ——————	1 s	688us/step -	-	loss:	1086932.3750
Epoch 27/50	_			_	
1465/1465 —	1 s	696us/step -	-	loss:	1038822.5625
Epoch 28/50	1 -	CO2 / - t			1002025 1250
1465/1465 ————————————————————————————————————	TS	683us/step -	-	LOSS:	1082925.1250
Epoch 29/50 1465/1465 ————————————————————————————————————	1 c	696us/sten -		1000	1001700 1250
Epoch 30/50	13	000us/step -		1055.	1091/00:1230
1465/1465 ————	1s	684us/sten -	_	loss:	1042117.2500
Epoch 31/50		00.00, 5.00			10 12117 12000
1465/1465 ——————	1 s	695us/step -	_	loss:	1004200.3750
Epoch 32/50		•			
1465/1465 ——————	1 s	693us/step -	-	loss:	1029586.2500
Epoch 33/50					
1465/1465 ————————————————————————————————————	1 s	693us/step -	-	loss:	1064257.3750
Epoch 34/50	_	604			004000 6050
1465/1465 ————————————————————————————————————	ls	681us/step -	-	loss:	984993.6250
Epoch 35/50 1465/1465 ————————————————————————————————————	1.	606us/stan		10001	1020202 0275
Epoch 36/50	12	ooous/step -	_	1055	1030392.9373
1465/1465 ————	15	682us/sten -	_	loss:	1074920.0000
Epoch 37/50		002u3/31cp			107 132010000
1465/1465 —————	1 s	675us/step -	_	loss:	1012781.7500
Epoch 38/50					
1465/1465 ———————	1 s	666us/step -	-	loss:	1044411.0625
Epoch 39/50					
1465/1465	1 s	675us/step -	-	loss:	1008846.2500
Epoch 40/50	1.	60446/6+65		10001	1154251 6250
1465/1465 — Epoch 41/50	12	o94us/step -	_	1055;	1154551.0250
1465/1465 —————	1ς	680us/sten -	_	lossi	1034781.7500
Epoch 42/50		ообаз, этер		.0551	103170117300
1465/1465 —————	1 s	684us/step -	_	loss:	1025693.3750
Epoch 43/50					
1465/1465 —————————	1 s	676us/step -	-	loss:	1079558.3750
Epoch 44/50					
1465/1465 ————————————————————————————————————	1 s	686us/step -	-	loss:	1054232.0000
Epoch 45/50		670		1 -	1011270 1077
1465/1465 ————————————————————————————————————	15	b/9us/step -	-	LOSS:	10113/9.18/5
Epoch 46/50 1465/1465 ————————————————————————————————————	1.	600112/2+22		1000:	1050562 0750
1403/1403	TS	ooous/step -	-	coss:	T020207 • 8120

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                       2s 684us/step - loss: 11029652.0000
Epoch 2/50
1465/1465 -
                          1s 675us/step - loss: 8557198.0000
Epoch 3/50
1465/1465 -
                           — 1s 680us/step - loss: 3289295.5000
Epoch 4/50
1465/1465 -
                            - 1s 669us/step - loss: 5226161.5000
Epoch 5/50
1465/1465 -
                             - 1s 652us/step - loss: 5279086.0000
Epoch 6/50
1465/1465 -
                           — 1s 673us/step - loss: 1744162.3750
Epoch 7/50
                          1s 655us/step - loss: 2766792.0000
1465/1465 -
Epoch 8/50
1465/1465 -
                             - 1s 672us/step - loss: 3886192.2500
Epoch 9/50
1465/1465 -
                             - 1s 671us/step - loss: 6112205.5000
Epoch 10/50
                            - 1s 669us/step - loss: 4675608.0000
1465/1465 -
Epoch 11/50
1465/1465 -
                             - 1s 682us/step - loss: 2320159.2500
Epoch 12/50
1465/1465 -
                             - 1s 670us/step - loss: 6751240.5000
Epoch 13/50
1465/1465 -
                          1s 666us/step - loss: 1976008.8750
Epoch 14/50
1465/1465 -
                             - 1s 682us/step - loss: 1983033.2500
Epoch 15/50
                           1s 669us/step - loss: 1750069.6250
1465/1465 -
Epoch 16/50
1465/1465 -
                             - 1s 674us/step - loss: 3677506.7500
```

E 17/50	
Epoch 17/50	1s 630us/step - loss: 3891798.7500
Epoch 18/50	13 03003/Step - toss. 3091/90:/300
	1s 677us/step - loss: 4321613.5000
Epoch 19/50	
1465/1465	1s 680us/step - loss: 5283490.5000
Epoch 20/50	
	1s 680us/step - loss: 3242538.7500
Epoch 21/50	
	1s 671us/step - loss: 2766015.7500
Epoch 22/50	1s 676us/step - loss: 2244856.7500
Epoch 23/50	15 0/003/Step - toss. 2244030:/300
	1s 675us/step - loss: 1539999.3750
Epoch 24/50	25 0,545,545p 10551 1 55555515750
	1s 653us/step - loss: 4720802.5000
Epoch 25/50	
	1s 683us/step - loss: 1869156.1250
Epoch 26/50	
	1s 696us/step - loss: 4259490.5000
Epoch 27/50	1s 694us/step - loss: 3932105.7500
Epoch 28/50	15 094u5/5tep - toss: 3932103.7300
	1s 703us/step - loss: 3140313.7500
Epoch 29/50	10 / 05 d5 / 5 top
1465/1465 ——————	1s 678us/step - loss: 4971966.5000
Epoch 30/50	
	1s 669us/step - loss: 8545526.0000
Epoch 31/50	
	1s 656us/step - loss: 4735506.5000
Epoch 32/50	1s 659us/step - loss: 3202636.2500
Epoch 33/50	15 03903/31ep - 1055. 3202030.2300
	1s 675us/step - loss: 3748252.7500
Epoch 34/50	, ,
1465/1465 ——————	1s 680us/step - loss: 4946897.0000
Epoch 35/50	
	1s 672us/step - loss: 3627723.0000
Epoch 36/50	1- (04/-+ 1 4624652 0000
Epoch 37/50	1s 684us/step - loss: 4634653.0000
•	1s 651us/step - loss: 1659317.2500
Epoch 38/50	23 031u3/3tep 1033. 103331/12300
	1s 652us/step - loss: 4302099.0000
Epoch 39/50	•
1465/1465 ——————	1s 674us/step - loss: 2346531.2500
Epoch 40/50	
	1s 666us/step - loss: 3542032.7500
Epoch 41/50	1e 660us/ston loss 2010622 5000
1403/1403	1s 668us/step - loss: 3810632.5000

```
Epoch 42/50
1465/1465 -
                         1s 625us/step - loss: 2408416.7500
Epoch 43/50
1465/1465 -
                             - 1s 641us/step - loss: 1991754.8750
Epoch 44/50
                             - 1s 639us/step - loss: 2137209.7500
1465/1465 -
Epoch 45/50
1465/1465 -
                             - 1s 674us/step - loss: 8045185.0000
Epoch 46/50
1465/1465 -
                             - 1s 639us/step - loss: 2985352.2500
Epoch 47/50
1465/1465 -
                           1s 650us/step - loss: 3962001.5000
Epoch 48/50
1465/1465 -
                           — 1s 645us/step - loss: 2802304.2500
Epoch 49/50
1465/1465 -
                            - 1s 674us/step - loss: 6901504.0000
Epoch 50/50
1465/1465 -
                          1s 662us/step - loss: 2053018.6250
733/733 —
                       1s 672us/step
Epoch 1/75
```

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
3s 664us/step - loss: 12436906.0000
2930/2930 ---
Epoch 2/75
                         2s 627us/step - loss: 12185549.0000
2930/2930 -
Epoch 3/75
2930/2930 -
                           — 2s 646us/step - loss: 12746427.0000
Epoch 4/75
                            - 2s 635us/step - loss: 6662068.0000
2930/2930 -
Epoch 5/75
                            — 2s 643us/step - loss: 7069942.5000
2930/2930 -
Epoch 6/75
2930/2930 -
                             - 2s 655us/step - loss: 7266759.5000
Epoch 7/75
2930/2930 -
                            - 2s 661us/step - loss: 4060929.7500
Epoch 8/75
                          2s 659us/step - loss: 3913304.2500
2930/2930 -
Epoch 9/75
2930/2930 -
                             - 2s 640us/step - loss: 3012239.7500
Epoch 10/75
2930/2930 -
                          2s 663us/step - loss: 2351321.0000
Epoch 11/75
2930/2930 -
                             - 2s 642us/step - loss: 4715974.0000
```

Frank 12/75					
Epoch 12/75 2930/2930 ————————————————————————————————————	26	600us /stop		1000	5502/22 0000
Epoch 13/75	23	ooous/step		1055.	330242210000
2930/2930 ————	2s	641us/step	_	loss:	3127344.5000
Epoch 14/75					
2930/2930 —————	2s	651us/step	_	loss:	2793542.0000
Epoch 15/75					
2930/2930 —————	2s	633us/step	-	loss:	3419552.7500
Epoch 16/75					
2930/2930 —————	2s	632us/step	-	loss:	2057520.5000
Epoch 17/75	2-	C00 / a t a n		1	6702066 0000
2930/2930 ————————————————————————————————————	25	609us/step	_	LOSS:	0/82000.0000
Epoch 18/75 2930/2930 ————————————————————————————————————	26	638us/stan	_	1000	2460700 7500
Epoch 19/75	23	030и3/31ср		(033.	240070017300
2930/2930 ————	2s	644us/step	_	loss:	2168765.0000
Epoch 20/75					
2930/2930 ——————	2s	604us/step	-	loss:	3597210.2500
Epoch 21/75					
2930/2930 ————	2s	621us/step	-	loss:	6160363.0000
Epoch 22/75 2930/2930 ————————————————————————————————————	20	64246/6469		10001	2012152 7500
Epoch 23/75	25	043us/step	_	1055	2012122.7200
2930/2930 ————	25	646us/sten	_	loss:	6207717.5000
Epoch 24/75		о тошо, о тор			0_011_110000
2930/2930 ——————	2s	631us/step	_	loss:	3609897.2500
Epoch 25/75					
2930/2930 —————	2s	638us/step	-	loss:	3447764.5000
Epoch 26/75	2 -	CE7 / - t		7	1652102 2750
2930/2930 — Epoch 27/75	25	65/us/step	_	LOSS:	1053193.3750
2930/2930 ————	25	650us/sten	_	1055	2967822 5000
Epoch 28/75		озоиз, э сер			230702213000
2930/2930 —————	2s	644us/step	_	loss:	3339683.2500
Epoch 29/75					
2930/2930 —————	2s	641us/step	-	loss:	1770814.5000
Epoch 30/75	2-	CC2 / a t a m		1	4476272 5000
2930/2930 — Epoch 31/75	25	662us/step	_	toss:	44/02/3.5000
2930/2930 ————	25	624us/sten	_	1055	4432209.0000
Epoch 32/75		024u3/3ccp			443220310000
2930/2930 —————	2s	633us/step	_	loss:	3661212.0000
Epoch 33/75					
2930/2930 —————	2s	654us/step	-	loss:	3395913.5000
Epoch 34/75	_	600 / :		,	E4E0E00 000
2930/2930 ————————————————————————————————————	25	608us/step	-	loss:	5150538.0000
Epoch 35/75 2930/2930 ————————————————————————————————————	25	651us/sten	_	10001	5110/01 0000
Epoch 36/75	25	02102/21Ch	_	1035.	7113431 ₽0000
2930/2930 ————	2s	667us/step	_	loss:	4669390.0000
,		,			,

Epoch 37/75 2930/2930	26	621us/sten	_	1000	11210/60 0000
Epoch 38/75	23	021u3/3tep		1033.	1121040910000
2930/2930 ————	2s	600us/step	_	loss:	1677019.3750
Epoch 39/75		,			
2930/2930 ————	2s	633us/step	_	loss:	2155551.7500
Epoch 40/75		·			
2930/2930 ————	2s	643us/step	_	loss:	3032119.5000
Epoch 41/75					
2930/2930 ————	2s	650us/step	-	loss:	7563602.5000
Epoch 42/75	_			-	
2930/2930 ————	2s	611us/step	_	loss:	535/033.0000
Epoch 43/75	2-	624		1	2624721 0000
2930/2930 — Epoch 44/75	25	634us/step	_	toss:	2034/21.0000
2930/2930 —————	26	6/0us/sten	_	1000	1236162 5000
Epoch 45/75	23	049и3/31Ср			423010213000
2930/2930 ————	2s	636us/step	_	loss:	4545516.0000
Epoch 46/75					
2930/2930 ————	2s	638us/step	_	loss:	2650784.7500
Epoch 47/75					
2930/2930 ————	2s	628us/step	_	loss:	2372446.0000
Epoch 48/75					
2930/2930 ————	2s	607us/step	_	loss:	6705768.5000
Epoch 49/75	_			-	
2930/2930 ————	2s	612us/step	_	loss:	6548962.5000
Epoch 50/75	2-	620		1	6535056 0000
2930/2930 — Epoch 51/75	25	629us/step	_	toss:	0323930.0000
2930/2930 ————	25	623us/sten	_	1055	1188781 1250
Epoch 52/75	23	023u3/3tcp			1100/01.1250
2930/2930 ————	2s	638us/step	_	loss:	6153833.5000
Epoch 53/75					
2930/2930 —————	2s	651us/step	_	loss:	4730545.0000
Epoch 54/75					
2930/2930 —————	2s	646us/step	_	loss:	1509318.0000
Epoch 55/75	_			_	
2930/2930 —	2s	644us/step	_	loss:	2/9/019.0000
Epoch 56/75	2-	640		1	2276720 7500
2930/2930 — Epoch 57/75	25	648us/step	_	toss:	33/0/38./300
2930/2930 ————	25	636us/sten	_	1000	3557736 0000
Epoch 58/75	23	050и3/31ср			333773010000
2930/2930 ————	2s	636us/step	_	loss:	3230496.2500
Epoch 59/75				·	
2930/2930 ————	2s	647us/step	_	loss:	1335292.8750
Epoch 60/75					
2930/2930 —————	2s	643us/step	-	loss:	1862712.5000
Epoch 61/75	_			_	
2930/2930 ————	2s	604us/step	-	loss:	6361599.0000

```
Epoch 62/75
2930/2930 -
                         2s 626us/step - loss: 7353259.0000
Epoch 63/75
2930/2930 -
                          2s 636us/step - loss: 4055401.7500
Epoch 64/75
                            - 2s 619us/step - loss: 4626877.0000
2930/2930 -
Epoch 65/75
2930/2930 -
                            - 2s 641us/step - loss: 2079325.2500
Epoch 66/75
2930/2930 -
                            - 2s 636us/step - loss: 2681320.0000
Epoch 67/75
2930/2930 -
                          2s 635us/step - loss: 2915540.7500
Epoch 68/75
2930/2930 -
                          2s 605us/step - loss: 1976904.5000
Epoch 69/75
2930/2930 -
                           — 2s 612us/step - loss: 4422050.0000
Epoch 70/75
2930/2930 -
                          2s 624us/step - loss: 1996881.0000
Epoch 71/75
2930/2930 -
                            - 2s 636us/step - loss: 3655371.7500
Epoch 72/75
2930/2930 -
                          2s 632us/step - loss: 2147799.0000
Epoch 73/75
2930/2930 -
                         2s 645us/step - loss: 1497804.8750
Epoch 74/75
2930/2930 -
                        2s 631us/step - loss: 7391660.5000
Epoch 75/75
2930/2930 -
                  2s 623us/step - loss: 3473614.5000
1s 637us/step
1465/1465 -
Epoch 1/75
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self. initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2930/2930 -
                         ---- 3s 649us/step - loss: 9491970.0000
Epoch 2/75
2930/2930 -
                          2s 650us/step - loss: 8536408.0000
Epoch 3/75
                        2s 647us/step - loss: 7096190.5000
2930/2930 -
Epoch 4/75
2930/2930 -
                          2s 629us/step - loss: 5548428.5000
Epoch 5/75
2930/2930 -
                        2s 645us/step - loss: 4150585.2500
Epoch 6/75
2930/2930 -
                           — 2s 613us/step - loss: 2947010.5000
```

Epoch 7/75				
2930/2930 ————	26	655us/sten -	. 1000	2277638 5000
Epoch 8/75	23	033u3/3tep =	(033.	2277030.3000
2930/2930 ————	2s	636us/step -	loss:	1870010.7500
Epoch 9/75				
2930/2930 —————	2s	613us/step -	loss:	1681327.6250
Epoch 10/75				
2930/2930 —————	2s	628us/step -	loss:	1685414.1250
Epoch 11/75				
2930/2930 —————	2s	599us/step -	loss:	1541063.0000
Epoch 12/75	2-	F00 / a + a =	1	1667066 7500
2930/2930 — Epoch 13/75	25	598us/step -	· LOSS:	100/000./500
2930/2930 ————————————————————————————————————	26	606us/sten -	1000	1/01503 2500
Epoch 14/75	25	owous/step -	. (033.	1401393.2300
2930/2930 ————	2s	630us/step -	loss:	1295709,1250
Epoch 15/75		остав, с тор		
2930/2930 —————	2s	664us/step -	loss:	1354754.1250
Epoch 16/75				
2930/2930 —————	2s	619us/step -	loss:	1247084.7500
Epoch 17/75		620 / 1	-	4407444 0750
2930/2930 ————————————————————————————————————	25	639us/step -	· LOSS:	118/411.3/50
Epoch 18/75 2930/2930 ————————————————————————————————————	26	6/6us/sten -	. 1000	1215026 3750
Epoch 19/75	23	040и3/31Ср	(0331	121300013730
2930/2930 ————	2s	651us/step -	loss:	1190745.7500
Epoch 20/75				
2930/2930 ——————	2s	650us/step -	loss:	1253901.1250
Epoch 21/75	_		-	
2930/2930 ————————————————————————————————————	2s	64/us/step -	loss:	1240248.7500
Epoch 22/75 2930/2930 ————————————————————————————————————	26	653us/sten -	1000	1205500 1250
Epoch 23/75	23	033us/step =	. (033.	1203300:1230
2930/2930 ————	2s	641us/step -	loss:	1155773.7500
Epoch 24/75				
2930/2930 ——————	2s	641us/step -	loss:	1144339.2500
Epoch 25/75			_	
2930/2930 ————————————————————————————————————	2s	646us/step -	loss:	1099857.8750
Epoch 26/75 2930/2930 ————————————————————————————————————	20	655uc/s+on	10001	1022021 5625
Epoch 27/75	25	obbus/step -	. (055)	1032031.3023
2930/2930 ————	2s	635us/step -	loss:	1101322.3750
Epoch 28/75		000 day, 0 dap	10001	
2930/2930 —————	2s	625us/step -	loss:	1051137.6250
Epoch 29/75				
2930/2930 —————	2s	628us/step -	loss:	1046835.1250
Epoch 30/75	_	625 / :	,	1002200 0255
2930/2930 ————————————————————————————————————	2 s	625us/step -	loss:	1062360.6250
Epoch 31/75 2930/2930 ————————————————————————————————————	25	608us/stan -	1000	1105/132 6250
2330/2330	45	owous/steh -	1022	TT07470.0570

Frank 22/75					
Epoch 32/75 2930/2930 ————————————————————————————————————	26	616us /stop		10001	11/2701 7500
Epoch 33/75	25	olous/step -	_	1055.	1143/01./300
2930/2930 ————	2s	628us/step -	_	loss:	1030580.1250
Epoch 34/75		•			
2930/2930 —————	2s	652us/step -	-	loss:	1044126.1250
Epoch 35/75					
2930/2930 —————	2s	636us/step -	-	loss:	1075816.2500
Epoch 36/75	2-	C25 /atam		1	1070450 0750
2930/2930 — Epoch 37/75	25	625us/step -	_	toss:	10/8458.8/50
2930/2930 ————	25	608us/sten -	_	loss:	1006224.5000
Epoch 38/75		000из/ 3 сер			100022413000
2930/2930 ————	2s	640us/step -	_	loss:	1075327.7500
Epoch 39/75		•			
2930/2930 —————	2s	639us/step -	-	loss:	1082611.2500
Epoch 40/75	_	650 ()		-	4005050 0405
2930/2930 ————————————————————————————————————	2s	652us/step -	-	loss:	1005053.3125
Epoch 41/75 2930/2930 ————————————————————————————————————	26	633us/sten -	_	1000	11//757 0000
Epoch 42/75	23	033u3/31cp		1033.	1144737.0000
2930/2930 ————	2s	673us/step -	_	loss:	1065957.3750
Epoch 43/75					
2930/2930 —————	2s	656us/step -	-	loss:	1214696.3750
Epoch 44/75				_	
2930/2930 ——————	2s	636us/step -	-	loss:	1086814.5000
Epoch 45/75 2930/2930 ————————————————————————————————————	26	636us /stop		10001	1110620 6250
Epoch 46/75	25	osous/step -	_	10551	1110020.0230
2930/2930 ————	2s	629us/step -	_	loss:	1091720.5000
Epoch 47/75		, , , , ,			
2930/2930 —————	2s	623us/step -	-	loss:	1064504.2500
Epoch 48/75				_	
2930/2930 —	2s	659us/step -	-	loss:	1088178.3750
Epoch 49/75 2930/2930 ————————————————————————————————————	26	664us/stop		10001	1006000 1075
Epoch 50/75	25	004us/step -	_	1055.	1000990.1073
2930/2930 ————	2s	662us/step -	_	loss:	1049522.6250
Epoch 51/75		, , , , ,			
2930/2930 —————	2s	642us/step -	-	loss:	1093599.5000
Epoch 52/75					
2930/2930 ————	2s	660us/step -	-	loss:	1027044.7500
Epoch 53/75	2-	620		1	1120400 7500
2930/2930 — Epoch 54/75	2 S	osgus/step -	-	LUSS:	1138488./500
2930/2930 ————	25	638us/sten -	_	loss:	1089317.0000
Epoch 55/75		, o cop			
2930/2930 ————	2s	637us/step -	_	loss:	1064040.8750
Epoch 56/75					
2930/2930 —————	2s	646us/step -	-	loss:	1145789.3750

```
Epoch 57/75
2930/2930 -
                         2s 653us/step - loss: 1118482.6250
Epoch 58/75
2930/2930 -
                            — 2s 620us/step - loss: 1153266.3750
Epoch 59/75
                             - 2s 647us/step - loss: 1119394.0000
2930/2930 -
Epoch 60/75
2930/2930 -
                             - 2s 637us/step - loss: 1027704.0000
Epoch 61/75
2930/2930 -
                             - 2s 777us/step - loss: 1040720.8125
Epoch 62/75
2930/2930 -
                           2s 669us/step - loss: 1064321.2500
Epoch 63/75
2930/2930 -
                            — 2s 676us/step - loss: 1039335.1875
Epoch 64/75
2930/2930 -
                             - 2s 674us/step - loss: 1094472.3750
Epoch 65/75
2930/2930 -
                           2s 667us/step - loss: 1079471.1250
Epoch 66/75
2930/2930 -
                            - 2s 663us/step - loss: 987507.8750
Epoch 67/75
2930/2930 -
                            — 2s 657us/step - loss: 1103683.5000
Epoch 68/75
2930/2930 -
                          2s 679us/step - loss: 1146919.0000
Epoch 69/75
2930/2930 -
                          2s 656us/step - loss: 1049665.5000
Epoch 70/75
2930/2930 -
                           2s 664us/step - loss: 1064993.5000
Epoch 71/75
2930/2930 -
                             - 2s 673us/step - loss: 1028387.6875
Epoch 72/75
2930/2930 -
                          2s 642us/step - loss: 1110876.7500
Epoch 73/75
2930/2930 -
                             - 2s 669us/step - loss: 1083190.1250
Epoch 74/75
2930/2930 -
                            — 2s 647us/step - loss: 1053340.5000
Epoch 75/75
2930/2930 -
                            - 2s 645us/step - loss: 1127440.0000
                       1s 635us/step
1465/1465 -
Epoch 1/75
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

2930/2930 — **3s** 655us/step - loss: 13701277.0000

Epoch 2/75					
2930/2930 ————	25	678us/sten	_	1055	15501140 0000
Epoch 3/75	23	070и3/31СР			1333114010000
2930/2930 ————	2s	686us/step	_	loss:	8521206.0000
Epoch 4/75		осошо, о гор			
2930/2930 —————	2s	679us/step	_	loss:	8249187.0000
Epoch 5/75		·			
2930/2930 —————	2s	686us/step	-	loss:	6888758.5000
Epoch 6/75					
2930/2930 —————	2s	683us/step	-	loss:	3677383.0000
Epoch 7/75	_				
2930/2930 ————	2s	683us/step	-	loss:	323/424.2500
Epoch 8/75	2-	COF / - +		1	2202005 0000
2930/2930 ————————————————————————————————————	25	o85us/step	_	toss:	3202893.0000
2930/2930 ————	26	680us/stan	_	1000	277521/ 2500
Epoch 10/75	23	00943/3 сер			277321412300
2930/2930 ————	2s	695us/step	_	loss:	3721569.0000
Epoch 11/75					
2930/2930 —————	2s	683us/step	_	loss:	2295383.2500
Epoch 12/75					
2930/2930 —————	2s	686us/step	-	loss:	2245071.0000
Epoch 13/75					
2930/2930 —————	2s	689us/step	-	loss:	5535588.5000
Epoch 14/75	_				2400007 7500
2930/2930 ————————————————————————————————————	25	686us/step	_	loss:	348889/./500
Epoch 15/75 2930/2930 ————————————————————————————————————	26	686us/sten		1000	2122546 7500
Epoch 16/75	23	000u3/31ep		1033.	212234017300
2930/2930 ————	2s	687us/step	_	loss:	2698212,2500
Epoch 17/75		,			
2930/2930 ——————	2s	686us/step	-	loss:	2576084.7500
Epoch 18/75					
2930/2930 ————	2s	688us/step	-	loss:	4539592.5000
Epoch 19/75	2-	700/		1	2027717 2500
2930/2930 ————————————————————————————————————	25	/wwws/step	_	toss:	382//1/.2500
2930/2930 ————	25	720us/sten	_	1055	2569800 2500
Epoch 21/75	23	72003/31CP			250500012500
2930/2930 ————	2s	690us/step	_	loss:	6214670,5000
Epoch 22/75		осоло, о гор			
2930/2930 ——————	2s	691us/step	_	loss:	1383693.8750
Epoch 23/75					
2930/2930 —————	2s	687us/step	-	loss:	2474165.2500
Epoch 24/75				_	
2930/2930 —	2s	686us/step	-	loss:	1959062.1250
Epoch 25/75	2	700		1	2002245 7500
2930/2930 ————————————————————————————————————	25	/wwws/step	-	LOSS:	2993345 . /500
Epoch 26/75 2930/2930 ————————————————————————————————————	26	697us /s+ss		1000:	2010222 5000
Z330/Z330 ———————————————————————————————————	25	00/us/step	_	1055	201025212000

Frank 27/75					
Epoch 27/75 2930/2930 ————————————————————————————————————	26	600115/5+00		1000	2210200 0000
Epoch 28/75	25	ooous/step	_	1055.	3210200.0000
2930/2930 ————	2s	692us/step	_	loss:	6536321.0000
Epoch 29/75					
2930/2930 —————	2s	703us/step	-	loss:	2060478.7500
Epoch 30/75					
2930/2930 —————	2s	729us/step	-	loss:	3914896.2500
Epoch 31/75	2-	CC2 / a t a m		1	1762702 0750
2930/2930 — Epoch 32/75	25	662us/step	_	loss:	1/03/82.8/50
2930/2930 ————	25	701us/sten	_	lossi	4125143.2500
Epoch 33/75		701u3,3ccp			412314312500
2930/2930 ————	2s	715us/step	_	loss:	3598172.7500
Epoch 34/75					
2930/2930 —————	2s	692us/step	-	loss:	2225747.2500
Epoch 35/75	_	604 ()		-	2277402 7500
2930/2930 ————————————————————————————————————	2s	691us/step	-	loss:	22//183./500
Epoch 36/75 2930/2930 ————————————————————————————————————	26	600us/sten	_	1000	3786608 7500
Epoch 37/75	23	090u3/31cp		1033.	370000017300
2930/2930 ————	2s	689us/step	_	loss:	4401505.5000
Epoch 38/75					
2930/2930 ——————	2s	686us/step	-	loss:	1603610.2500
Epoch 39/75				_	
2930/2930 ————————————————————————————————————	2s	693us/step	-	loss:	3663885.2500
Epoch 40/75 2930/2930 ————————————————————————————————————	26	603us/stop		1000	1062252 6250
Epoch 41/75	25	093us/step	_	10551	1902233:0230
2930/2930 ————	2s	689us/step	_	loss:	2017959.3750
Epoch 42/75		, , , , ,			
2930/2930 —————	2s	689us/step	-	loss:	3264397.5000
Epoch 43/75					
2930/2930 ————————————————————————————————————	2s	690us/step	-	loss:	2184971.7500
Epoch 44/75 2930/2930 ————————————————————————————————————	20	600us /stop		10001	0722550 0000
Epoch 45/75	25	090us/step	_	1055.	0/32330:0000
2930/2930 ————	2s	691us/step	_	loss:	3054245.5000
Epoch 46/75		, ,			
2930/2930 —————	2s	692us/step	-	loss:	2668262.7500
Epoch 47/75					
2930/2930 ————	2s	687us/step	-	loss:	4916427.5000
Epoch 48/75	20	69646/6+00		10001	4400004 E000
2930/2930 — Epoch 49/75	25	ooous/step	_	1055:	4408094.3000
2930/2930 ————	2s	691us/sten	_	loss:	2311157.2500
Epoch 50/75		, , , , , , , , , , , , , , , , , , ,			3===3 33
2930/2930 —————	2s	798us/step	_	loss:	3370885.5000
Epoch 51/75				_	
2930/2930 —————	2s	691us/step	-	loss:	2155022.5000

Epoch 52/75				
2930/2930 ————	25	682us/sten -	1000	3600888 7500
Epoch 53/75	23	002u3/3tcp	(033.	303000017300
2930/2930 ————	2s	685us/step -	loss:	4303314.0000
Epoch 54/75				
2930/2930 —————	2s	688us/step -	loss:	3637166.5000
Epoch 55/75		·		
2930/2930 —————	2s	690us/step -	loss:	1396608.6250
Epoch 56/75				
2930/2930 —————	2s	685us/step -	loss:	1987498.3750
Epoch 57/75	_			
2930/2930 —————	2s	689us/step -	loss:	2/80514.0000
Epoch 58/75	2-	C70 / - +	1	F201200 0000
2930/2930 — Epoch 59/75	25	6/9us/step -	toss:	5301209.0000
2930/2930 ————	25	678us/sten -	1000	3000562 5000
Epoch 60/75	23	070u3/3tcp	(033.	303030213000
2930/2930 ————	2s	704us/step -	loss:	7790914.0000
Epoch 61/75		-		
2930/2930 —————	2s	689us/step -	loss:	2584644.0000
Epoch 62/75				
2930/2930 —————	2s	689us/step -	loss:	5756951.5000
Epoch 63/75				
2930/2930 ————	2s	640us/step -	loss:	5248310.5000
Epoch 64/75	2 -	COF / - t	1	1551022 2500
2930/2930 ————————————————————————————————————	25	685us/step -	loss:	1551922.2500
Epoch 65/75 2930/2930 ————————————————————————————————————	20	600us/stan	10001	1701619 0000
Epoch 66/75	25	ooous/step -	1055	4/04040.0000
2930/2930 ————	25	689us/sten -	loss:	2864059.5000
Epoch 67/75		00343, 3106		200103313000
2930/2930 —————	2s	686us/step -	loss:	1819556.2500
Epoch 68/75				
2930/2930 ——————	2s	681us/step -	loss:	3042536.5000
Epoch 69/75				
2930/2930 ——————	2s	666us/step -	loss:	1373043.6250
Epoch 70/75	_			
2930/2930 ————————————————————————————————————	25	6/9us/step -	loss:	1495843.6250
Epoch 71/75	2.	601,45/5+55	10001	2001700 7500
2930/2930 — Epoch 72/75	25	oolus/step -	1055:	3991/99./300
2930/2930 ————	25	684us/sten -	lossi	2630646.5000
Epoch 73/75		00 103, 3 100		203001013000
2930/2930 ————	2s	680us/step -	loss:	2617157.2500
Epoch 74/75		- 1		
2930/2930 ——————	2s	680us/step -	loss:	4972333.5000
Epoch 75/75				
2930/2930 —————	2s	686us/step -	loss:	1666120.6250
1465/1465	1 s	667us/step		
Epoch 1/75				

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super(). init (activity_regularizer=activity_regularizer, **kwargs)

super()init(ad			-	_
2930/2930 ————	3s	827us/step -	loss:	10337993.0000
Epoch 2/75				
2930/2930 ————	2s	818us/step -	loss:	6023181.0000
Epoch 3/75				
2930/2930 ————	2s	832us/step -	loss:	3863126.0000
Epoch 4/75				
2930/2930 ————	3s	927us/step -	loss:	2072378.3750
Epoch 5/75				
2930/2930 ————	2s	818us/step -	loss:	2422729.0000
Epoch 6/75		700 / 1	-	2447550 2222
2930/2930 ————————————————————————————————————	2s	/93us/step -	loss:	241/558.0000
Epoch 7/75	2-	000/	1	2254060 2500
2930/2930 ————————————————————————————————————	ZS	808us/step -	loss:	3354000.2500
Epoch 8/75 2930/2930 —————	26	927us /stop	1000	2219660 0000
Epoch 9/75	25	02/us/step -	1055.	2210000.0000
2930/2930 ————	2s	836us/sten -	lossi	1676751 3750
Epoch 10/75	23	030и3/31ср		10/0/3113/30
2930/2930 ———	2s	823us/step -	loss:	3108063.5000
Epoch 11/75		0_0,0,0,0	10001	
2930/2930 ————	3s	870us/step -	loss:	5521501.5000
Epoch 12/75		, ,		
2930/2930 ————	3s	849us/step -	loss:	1773912.7500
Epoch 13/75				
2930/2930 ————	2s	824us/step -	loss:	4142378.2500
Epoch 14/75				
2930/2930 ————	2s	809us/step -	loss:	7629577.5000
Epoch 15/75				
2930/2930 ————	2s	812us/step -	loss:	4802915.0000
Epoch 16/75		000 / 1	-	2265522 7522
2930/2930 ————	2s	802us/step -	loss:	2365522./500
Epoch 17/75	2-	702 / - +	1	2122562 0000
	2S	/83us/step -	loss:	3133563.0000
Epoch 18/75	20	01246/6+05	10001	2040527 7500
2930/2930 ————————————————————————————————————	25	oizus/step -	10551	2049337.7300
2930/2930 ————	2c	835us/sten -	1000	1503310 1250
Epoch 20/75	25	03303/31EP -	.033.	120221011520
2930/2930 ————	2c	840us/sten -	lossi	4020403.0000
Epoch 21/75	25	5-1003/31Cp -	.0331	702070310000
2930/2930 ————	2s	818us/sten -	loss:	5539332.5000
	23	01000, 5 сер		555555215000

Epoch 22/75						
2930/2930 ————	25	821us/sten	_	1055.	4252582 500	a
Epoch 23/75	23	021d3/3tcp			42323021300	0
2930/2930 ————	2s	804us/step	_	loss:	1858762.250	0
Epoch 24/75						
2930/2930 ——————	2s	814us/step	-	loss:	2790308.750	0
Epoch 25/75						
2930/2930 —————	2s	818us/step	-	loss:	2313743.000	0
Epoch 26/75	2 -	000		1	1626766 750	^
2930/2930 — Epoch 27/75	25	800us/step	_	loss:	1030/00./50	0
2930/2930 ————	25	834us/sten	_	1055.	2193762 000	a
Epoch 28/75		054d5/5ccp			21337021000	0
2930/2930 ————	2s	843us/step	_	loss:	7152242.500	0
Epoch 29/75		•				
2930/2930 —————	2s	814us/step	-	loss:	2999779.750	0
Epoch 30/75						
2930/2930 ————————————————————————————————————	3s	913us/step	-	loss:	1962702.000	0
Epoch 31/75 2930/2930 ————————————————————————————————————	20	926us /s+op		10001	2262700 750	Ω
Epoch 32/75	25	ozous/step	_	1055:	2203700.730	U
2930/2930 ————	25	826us/sten	_	loss:	4279063.000	a
Epoch 33/75		о_оцо, о тор			,	
2930/2930 —————	2s	836us/step	_	loss:	3374929.250	0
Epoch 34/75						
2930/2930 —————	2s	812us/step	-	loss:	1518900.500	0
Epoch 35/75	_			_		_
2930/2930 ————————————————————————————————————	3s	940us/step	-	loss:	646/453.000	0
Epoch 36/75 2930/2930 ————————————————————————————————————	26	9/11us/sten	_	1000	3085/110 250	a
Epoch 37/75	23	041u3/3tep		1033.	39034101230	U
2930/2930 ————	2s	817us/step	_	loss:	1701221.750	0
Epoch 38/75						
2930/2930 —————	2s	825us/step	-	loss:	1176664.250	0
Epoch 39/75	_			_		
2930/2930 ————————————————————————————————————	3s	953us/step	-	loss:	7082598.000	0
Epoch 40/75 2930/2930 ————————————————————————————————————	26	929us/stan		1000	1039207 000	a
Epoch 41/75	25	ozous/step	_	1055.	4936207.000	U
2930/2930 ————	2s	814us/step	_	loss:	6071514.500	0
Epoch 42/75		01 .u0, 010p				
2930/2930 ——————	2s	822us/step	_	loss:	4000461.500	0
Epoch 43/75						
2930/2930 —————	2s	840us/step	-	loss:	1399275.750	0
Epoch 44/75	_	0.4.4		1	2200020 500	0
2930/2930 ————————————————————————————————————	2 S	844us/step	_	LOSS:	2380839 . 500	0
Epoch 45/75 2930/2930 ————————————————————————————————————	2¢	878us/stan	_	1000	2008530 000	a
Epoch 46/75	23	02003/316μ	_	.033.	2030330 000	U
2930/2930 ————	2s	846us/step	_	loss:	6213638.000	0
•		,				

Epoch 47/75					
2930/2930 —————	3¢	855us/sten	_	1055.	2102430 7500
Epoch 48/75	J 3	033u3/3tcp			213243317300
2930/2930 ————	2s	825us/step	_	loss:	3952687.7500
Epoch 49/75					
2930/2930 ——————	3s	856us/step	-	loss:	3710378.5000
Epoch 50/75					
2930/2930 —————	2s	835us/step	-	loss:	3984081.5000
Epoch 51/75	2 -	000		1	2700450 2500
2930/2930 — Epoch 52/75	35	899us/step	_	loss:	3/98159.2500
2930/2930 ————	3¢	805us/sten	_	1055.	4512483 5000
Epoch 53/75	33	03343, 3 tep			431240313000
2930/2930 —————	2s	819us/step	_	loss:	5605618.0000
Epoch 54/75					
2930/2930 —————	2s	817us/step	-	loss:	4574415.0000
Epoch 55/75					
2930/2930 —————	2s	814us/step	-	loss:	3102314.5000
Epoch 56/75 2930/2930 ————————————————————————————————————	26	001us/ston		10001	1/122/2 2750
Epoch 57/75	25	owius/steb	_	1055:	1413242.3730
2930/2930 ————	2s	787us/step	_	loss:	5323682.0000
Epoch 58/75		, o, ao, o cop			
2930/2930 —————	2s	799us/step	_	loss:	3484503.2500
Epoch 59/75					
2930/2930 —————	2s	808us/step	-	loss:	5452190.0000
Epoch 60/75	_			-	
2930/2930 ————————————————————————————————————	2s	818us/step	-	loss:	1864023.2500
Epoch 61/75 2930/2930 ————————————————————————————————————	26	215us/sten	_	1000	350///7 2500
Epoch 62/75	23	013u3/3tep		1033.	3304447.2300
2930/2930 ————	2s	791us/step	_	loss:	7122500.0000
Epoch 63/75					
2930/2930 —————	3s	847us/step	-	loss:	2378075.0000
Epoch 64/75	_			_	
2930/2930 ————————————————————————————————————	3s	848us/step	-	loss:	2315620.2500
Epoch 65/75 2930/2930 ————————————————————————————————————	26	925us/sten		1000	317/515 5000
Epoch 66/75	25	623us/step	_	1055.	3174313.3000
2930/2930 ————	2s	799us/step	_	loss:	4399948.5000
Epoch 67/75		, 55 a 5 , 5 c 6 p			
2930/2930 —————	2s	790us/step	_	loss:	3720261.0000
Epoch 68/75					
2930/2930 —————	2s	805us/step	-	loss:	2057517.8750
Epoch 69/75	_	006		1	44 42022 7522
2930/2930 ————————————————————————————————————	2 S	გიის გენის გე	-	LOSS:	4143822./500
Epoch 70/75 2930/2930 ————————————————————————————————————	25	800us/sten	_	1000	1716161 0000
Epoch 71/75	43	ουσα3/315μ	_	.033	T/ TOTOT # 0000
2930/2930 ————	2s	798us/step	_	loss:	5226699.5000
,	-	, 5 p			

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2930/2930 -
                      3s 780us/step - loss: 3405275.2500
Epoch 2/75
2930/2930 -
                         2s 783us/step - loss: 1083972.5000
Epoch 3/75
                         2s 786us/step - loss: 1127228.1250
2930/2930 -
Epoch 4/75
2930/2930 -
                           — 2s 770us/step - loss: 1060700.6250
Epoch 5/75
2930/2930 -
                            - 2s 782us/step - loss: 1047577.4375
Epoch 6/75
2930/2930 -
                          2s 739us/step - loss: 1002108.5625
Epoch 7/75
                         2s 772us/step - loss: 1062041.3750
2930/2930 -
Epoch 8/75
2930/2930 -
                            - 2s 782us/step - loss: 1029065.8750
Epoch 9/75
                            - 2s 765us/step - loss: 1056728.7500
2930/2930 -
Epoch 10/75
2930/2930 -
                            — 2s 788us/step - loss: 1041073.5625
Epoch 11/75
2930/2930 -
                             - 2s 763us/step - loss: 1056422.1250
Epoch 12/75
2930/2930 -
                           — 2s 787us/step - loss: 1008993.8750
Epoch 13/75
                          2s 788us/step - loss: 1086307.2500
2930/2930 -
Epoch 14/75
2930/2930 -
                             - 2s 785us/step - loss: 980839.5625
Epoch 15/75
2930/2930 -
                         2s 787us/step - loss: 1154135.3750
Epoch 16/75
```

- 2s 783us/step - loss: 1038237.9375

2930/2930 -

Epoch 17/75 2930/2930 ————————————————————————————————————	20	70000 / 6+00		10001	004225 4275
Epoch 18/75	25	/oous/step -	_	1055;	964223.4373
2930/2930 ————	2s	784us/step -	_	loss:	1077403.0000
Epoch 19/75		-			
2930/2930 ——————	2s	792us/step -	-	loss:	956840.6250
Epoch 20/75					
2930/2930 —————	2s	788us/step -	-	loss:	964861.3750
Epoch 21/75	2-	700 / - +		1	1014604 2500
2930/2930 — Epoch 22/75	25	/89us/step -	-	1055:	1014094.2500
2930/2930 ————	2s	789us/step -	_	loss:	1036792.5625
Epoch 23/75		, cous, c cop			
2930/2930 —————	2s	792us/step -	-	loss:	1051215.3750
Epoch 24/75					
2930/2930 —————	2s	781us/step -	-	loss:	949605.9375
Epoch 25/75	2-	752 / - +		1	062700 0125
2930/2930 — Epoch 26/75	25	/53us/step -	_	loss:	903/99.8125
2930/2930 ————	2s	782us/step -	_	loss:	1024958.5625
Epoch 27/75					
2930/2930 —————	2s	761us/step -	-	loss:	918075.8125
Epoch 28/75					
2930/2930 ————————————————————————————————————	2s	783us/step -	-	loss:	1009477.0000
Epoch 29/75 2930/2930 ————————————————————————————————————	20	707us /stop		10001	000000 6050
Epoch 30/75	25	76/us/step -	_	10551	900902:0230
2930/2930 ————	2s	768us/step -	_	loss:	1011657.7500
Epoch 31/75		, ,			
2930/2930 —————	2s	789us/step -	-	loss:	1025086.1875
Epoch 32/75	_			_	
2930/2930 ————————————————————————————————————	2s	//4us/step -	-	loss:	1053041.3/50
Epoch 33/75 2930/2930 ————————————————————————————————————	25	778us/sten -	_	1066.	1041456 1250
Epoch 34/75	23	770u373ccp			104143011230
2930/2930 —————	2s	784us/step -	_	loss:	1036295.0625
Epoch 35/75					
2930/2930 —————	2s	780us/step -	-	loss:	967589.4375
Epoch 36/75	2-	774/		1	1002466 6250
2930/2930 — Epoch 37/75	25	//4us/step -	_	loss:	1083400.0250
2930/2930 ————	25	775us/sten -	_	loss:	967813.6250
Epoch 38/75		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			30,01310130
2930/2930 ——————	2s	773us/step -	-	loss:	1220757.6250
Epoch 39/75					
2930/2930 ————————————————————————————————————	2s	760us/step -	-	loss:	1059583.5000
Epoch 40/75	2-	776.00/0+05		1000	070045 2750
2930/2930 — Epoch 41/75	2 S	//ous/step -	-	LUSS:	9/8045.3/50
2930/2930 ————	25	768us/sten -	_	loss:	974237.4375
	_3	. 0003, 3 сер		.033.	57 1237 17373

Frank 42 /75				
Epoch 42/75 2930/2930 ————————————————————————————————————	26	78/us/sten -	10001	101/1715 5625
Epoch 43/75	23	704u3/3tep -	1033.	1014/13:3023
2930/2930 ————	2s	769us/step -	loss:	1079508.0000
Epoch 44/75				
2930/2930 ——————	2s	786us/step -	loss:	1010894.3750
Epoch 45/75				
2930/2930 —————	2s	763us/step -	loss:	1047834.5625
Epoch 46/75	_	705 / .	-	4000000
2930/2930 ————————————————————————————————————	25	/85us/step -	loss:	1060305.0000
Epoch 47/75 2930/2930 ————————————————————————————————————	26	7/7us/sten -	1000	10/18675 2500
Epoch 48/75	23	747us/step –	1055.	1040073.2300
2930/2930 ————	2s	757us/step -	loss:	1047350.4375
Epoch 49/75		₋ -		
2930/2930 ——————	2s	780us/step -	loss:	1012261.3750
Epoch 50/75				
2930/2930 —————	2s	781us/step –	loss:	981656.7500
Epoch 51/75 2930/2930 ————————————————————————————————————	2 -	777 / - 1	7	020525 5625
Epoch 52/75	2 S	///us/step -	LOSS:	939525.5625
2930/2930 ————————————————————————————————————	25	777us/sten -	1066.	1032128 0000
Epoch 53/75	23	777u373ccp		103212010000
2930/2930 ————	2s	778us/step -	loss:	1068208.8750
Epoch 54/75				
2930/2930 ——————	2s	777us/step -	loss:	969544.9375
Epoch 55/75				
2930/2930 ————	2s	768us/step –	loss:	1031323.7500
Epoch 56/75	2-	770 / - +	1	1010200 1250
2930/2930 — Epoch 57/75	25	//9us/step -	LOSS:	1018380.1250
2930/2930 ————	25	762us/sten -	1055.	1005304 8750
Epoch 58/75	23	702u3/3tcp		103333410730
2930/2930 ————	2s	764us/step -	loss:	968740.4375
Epoch 59/75				
2930/2930 ——————	2s	749us/step -	loss:	965837.6875
Epoch 60/75	_		-	
2930/2930 ————————————————————————————————————	2s	/4/us/step -	loss:	1003168.5000
Epoch 61/75 2930/2930 ————————————————————————————————————	26	74645/5+00	1000	1025026 1075
Epoch 62/75	25	740us/step -	10551	1023920:1073
2930/2930 ————	2s	777us/step -	loss:	962047.1250
Epoch 63/75				
2930/2930 —————	2s	776us/step -	loss:	973799.8125
Epoch 64/75				
2930/2930 —————	2s	750us/step -	loss:	1087709.7500
Epoch 65/75	_	774 / :	,	024007 5007
2930/2930 ————————————————————————————————————	2 s	//lus/step -	loss:	93189/.5625
Epoch 66/75 2930/2930 ————————————————————————————————————	20	77706/6+00	1000:	1061022 6250
233U/233U 	25	///us/step -	1055	T00T025.0520

```
Epoch 67/75
2930/2930 -
                         2s 761us/step - loss: 1050881.1250
Epoch 68/75
2930/2930 -
                           — 2s 760us/step - loss: 1061801.6250
Epoch 69/75
                            - 2s 755us/step - loss: 985331.9375
2930/2930 -
Epoch 70/75
2930/2930 -
                             - 2s 764us/step - loss: 1089869.2500
Epoch 71/75
2930/2930 -
                             - 2s 750us/step - loss: 997871.5625
Epoch 72/75
2930/2930 -
                           2s 722us/step - loss: 996420.3750
Epoch 73/75
2930/2930 -
                           — 2s 756us/step - loss: 961105.9375
Epoch 74/75
2930/2930 -
                            — 2s 762us/step - loss: 1007541.0000
Epoch 75/75
2930/2930 -
                          2s 771us/step - loss: 1042718.5625
1465/1465 -
                         1s 681us/step
Epoch 1/75
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
3s 761us/step - loss: 4942523.5000
2930/2930 ---
Epoch 2/75
                         2s 754us/step - loss: 2954146.0000
2930/2930 -
Epoch 3/75
2930/2930 -
                           — 2s 767us/step - loss: 9744625.0000
Epoch 4/75
                            — 2s 738us/step - loss: 1747813.7500
2930/2930 -
Epoch 5/75
2930/2930 -
                            — 2s 740us/step - loss: 3454456.5000
Epoch 6/75
2930/2930 -
                             - 2s 754us/step - loss: 2620758.7500
Epoch 7/75
2930/2930 -
                            - 2s 733us/step - loss: 1147251.0000
Epoch 8/75
2930/2930 -
                          2s 732us/step - loss: 2349039.7500
Epoch 9/75
2930/2930 -
                             - 2s 716us/step - loss: 4584922.0000
Epoch 10/75
2930/2930 -
                          2s 745us/step - loss: 4471733.0000
Epoch 11/75
2930/2930 -
                             - 2s 741us/step - loss: 1890275.6250
```

Frank 10/75					
Epoch 12/75 2930/2930 ————————————————————————————————————	26	72245/5+00		10001	2024067 7500
Epoch 13/75	25	/32us/step	_	1055.	3034007.7300
2930/2930 ————	2s	715us/step	_	loss:	3567980.2500
Epoch 14/75					
2930/2930 ——————	2s	748us/step	-	loss:	9510932.0000
Epoch 15/75					
2930/2930 —————	2s	730us/step	-	loss:	3517983.5000
Epoch 16/75	2-	751/		1	2046000 2500
2930/2930 — Epoch 17/75	25	/Sius/step	_	LOSS:	2946998.2500
2930/2930 ————	25	731us/sten	_	1055.	3168687.7500
Epoch 18/75		731u3/3ccp			310000717300
2930/2930 ————	2s	742us/step	_	loss:	8399431.0000
Epoch 19/75					
2930/2930 —————	2s	749us/step	-	loss:	2104044.2500
Epoch 20/75	_			-	
2930/2930 ————————————————————————————————————	2s	/44us/step	-	loss:	/009853.5000
Epoch 21/75 2930/2930 ————————————————————————————————————	26	7/2us/sten	_	1000	1265830 3750
Epoch 22/75	23	742u3/31cp		1033.	1203039:3730
2930/2930 ————	2s	734us/step	_	loss:	4654277.5000
Epoch 23/75					
2930/2930 —————	2s	729us/step	-	loss:	2079303.1250
Epoch 24/75	_			_	
2930/2930 ————————————————————————————————————	2s	748us/step	-	loss:	4468124.5000
Epoch 25/75 2930/2930 ————————————————————————————————————	26	753us/sten		10001	2/21600 5000
Epoch 26/75	25	/33us/step	_	1055.	2421099.3000
2930/2930 ————	2s	743us/step	_	loss:	8046215.5000
Epoch 27/75		,			
2930/2930 —————	2s	755us/step	-	loss:	2260596.2500
Epoch 28/75				_	
2930/2930 ————————————————————————————————————	2s	736us/step	-	loss:	3375235.7500
Epoch 29/75 2930/2930 ————————————————————————————————————	26	7/5us/sten		1000	1006075 1250
Epoch 30/75	23	745us/step	_	1055.	1900073.1230
2930/2930 ————	2s	745us/step	_	loss:	3527803.5000
Epoch 31/75					
2930/2930 —————	2s	745us/step	-	loss:	5319086.5000
Epoch 32/75				_	
2930/2930 ————————————————————————————————————	2s	755us/step	-	loss:	1590657.7500
Epoch 33/75	26	72745/5+00		10001	E010144 E000
2930/2930 — Epoch 34/75	25	/3/us/step	_	1055;	79T0144.7000
2930/2930 ————	2s	741us/sten	_	loss:	2354401.2500
Epoch 35/75		, 			
2930/2930 —————	2s	726us/step	_	loss:	3596921.0000
Epoch 36/75				_	
2930/2930 —————	2s	722us/step	-	loss:	2812593.7500

E 27.75					
Epoch 37/75 2930/2930 ————————————————————————————————————	20	777us /s+on		10001	2557472 2500
Epoch 38/75	25	///us/step	_	10551	2557472.2500
2930/2930 ————	2s	769us/step	_	loss:	4529131.0000
Epoch 39/75		, σ σ σ σ			
2930/2930 ——————	2s	766us/step	_	loss:	7457142.5000
Epoch 40/75					
2930/2930 —————	2s	761us/step	-	loss:	2088038.3750
Epoch 41/75	•	770 / 1			4543005 0000
2930/2930 — Epoch 42/75	2 S	//8us/step	_	loss:	4513095.0000
2930/2930 ————	25	741us/sten	_	1055.	1487604.0000
Epoch 43/75	23	74103/31СР			140700410000
2930/2930 ————	2s	771us/step	_	loss:	2283193.2500
Epoch 44/75					
2930/2930 —————	2s	765us/step	-	loss:	2312347.0000
Epoch 45/75	_			_	
2930/2930 ————————————————————————————————————	2s	768us/step	-	loss:	3088704.5000
Epoch 46/75 2930/2930 ————————————————————————————————————	26	760us/sten		10001	1137563 0000
Epoch 47/75	25	709us/step	_	1055.	413/303.0000
2930/2930 ————	2s	764us/step	_	loss:	2249919.7500
Epoch 48/75		, σ το μ			
2930/2930 ——————	2s	769us/step	_	loss:	1494990.7500
Epoch 49/75					
2930/2930 ————	2s	765us/step	-	loss:	1763538.3750
Epoch 50/75	2-	761/		1	4004252 2500
2930/2930 — Epoch 51/75	25	/61us/step	_	LOSS:	4084353.2500
2930/2930 ————	25	770us/sten	_	loss:	2874643.2500
Epoch 52/75		,, ods, scep			207 10 13 12 300
2930/2930 —————	2s	761us/step	_	loss:	4070905.2500
Epoch 53/75					
2930/2930 ————	2s	762us/step	-	loss:	3452477.5000
Epoch 54/75	2-	760/		1	1654000 2750
2930/2930 — Epoch 55/75	25	/ouus/step	_	LOSS:	1054898.3750
2930/2930 ————	25	762us/sten	_	loss:	5058198.5000
Epoch 56/75		, 02 d 3 , 3 c c p			303013013000
2930/2930 —————	2s	747us/step	_	loss:	4333930.5000
Epoch 57/75					
2930/2930 —————	2s	764us/step	-	loss:	2624562.7500
Epoch 58/75		760 ()		-	2022762 2022
2930/2930 ————————————————————————————————————	2s	/60us/step	_	loss:	2922/68.0000
Epoch 59/75 2930/2930 ————————————————————————————————————	25	771115/sten	_	10661	1900767 1250
Epoch 60/75	23	, , 103/31Ch	_	.033.	1900/0/17230
2930/2930 ————	2s	769us/step	_	loss:	4842227.0000
Epoch 61/75					
2930/2930 —————	3s	884us/step	-	loss:	2083577.5000

```
Epoch 62/75
2930/2930 -
                         2s 771us/step - loss: 6385903.5000
Epoch 63/75
2930/2930 -
                           — 2s 777us/step - loss: 2886946.0000
Epoch 64/75
                            - 2s 783us/step - loss: 3182909.2500
2930/2930 -
Epoch 65/75
2930/2930 -
                             - 2s 800us/step - loss: 5144878.0000
Epoch 66/75
2930/2930 -
                             - 2s 790us/step - loss: 3019131.2500
Epoch 67/75
2930/2930 -
                          2s 786us/step - loss: 7769826.5000
Epoch 68/75
2930/2930 -
                           — 3s 879us/step - loss: 3677359.5000
Epoch 69/75
2930/2930 -
                            — 2s 786us/step - loss: 4539627.0000
Epoch 70/75
2930/2930 -
                          2s 783us/step - loss: 2435730.5000
Epoch 71/75
2930/2930 -
                            - 2s 777us/step - loss: 2004514.3750
Epoch 72/75
2930/2930 -
                           2s 755us/step - loss: 1963520.1250
Epoch 73/75
2930/2930 -
                          2s 765us/step - loss: 2187641.2500
Epoch 74/75
2930/2930 -
                         2s 793us/step - loss: 1686006.7500
Epoch 75/75
2930/2930 -
                   2s 771us/step - loss: 4602201.5000

1s 693us/step
1465/1465 -
Epoch 1/100
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self. initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                         3s 738us/step - loss: 8126386.5000
Epoch 2/100
1465/1465 -
                          1s 735us/step - loss: 1534210.2500
Epoch 3/100
                         1s 693us/step - loss: 1855286.8750
1465/1465 -
Epoch 4/100
1465/1465 -
                            - 1s 706us/step - loss: 4324684.5000
Epoch 5/100
1465/1465 -
                         1s 696us/step - loss: 1559642.0000
Epoch 6/100
1465/1465 -
                            - 1s 723us/step - loss: 2695428.7500
```

Epoch 7/100	
	1s 688us/step - loss: 2507508.0000
Epoch 8/100	13 000d3/3tep - t033: 250/500:0000
	1s 715us/step - loss: 2254747.5000
Epoch 9/100	23 7 13 43 7 3 40 \$ 40 33 1 223 17 17 13 00 0
	1s 736us/step - loss: 1949390.7500
Epoch 10/100	
	1s 745us/step - loss: 2857201.5000
Epoch 11/100	·
1465/1465 ————————	1s 712us/step - loss: 2869997.2500
Epoch 12/100	
	1s 713us/step - loss: 2258031.7500
Epoch 13/100	
	1s 705us/step - loss: 4040382.2500
Epoch 14/100	1- 720/
Epoch 15/100	1s 739us/step - loss: 3117045.0000
	1s 712us/step - loss: 1754368.1250
Epoch 16/100	13 /12u3/3tep - t033: 1/34300:1230
1465/1465	1s 697us/step - loss: 2151829.0000
Epoch 17/100	
	1s 715us/step - loss: 2971181.2500
Epoch 18/100	·
	1s 708us/step - loss: 7423361.0000
Epoch 19/100	
	1s 736us/step - loss: 3874477.7500
Epoch 20/100	
	1s 723us/step - loss: 3297644.0000
Epoch 21/100	1s 718us/step - loss: 3414817.0000
Epoch 22/100	15 /18us/step - toss: 3414817.0000
•	1s 720us/step - loss: 2679822.2500
Epoch 23/100	23 720037 3 CCp
	1s 705us/step - loss: 3543407.7500
Epoch 24/100	
1465/1465	1s 716us/step - loss: 2421091.0000
Epoch 25/100	
	1s 709us/step - loss: 5264743.5000
Epoch 26/100	
	1s 714us/step - loss: 3570710.2500
Epoch 27/100	1- 715/
	1s 715us/step - loss: 1587097.3750
Epoch 28/100	1s 714us/step - loss: 4049893.5000
Epoch 29/100	13 / 1403/31Ch - 1033. 4043033.3000
	1s 688us/step - loss: 3406869.0000
Epoch 30/100	1 31111, 1114
	1s 641us/step - loss: 3164534.2500
Epoch 31/100	·
1465/1465 —————	1s 677us/step - loss: 2606192.7500

E 22/400	
Epoch 32/100	1s 727us/step - loss: 1541156.2500
Epoch 33/100	15 /2/us/step - toss. 1541150:2500
	1s 689us/step - loss: 3082673.7500
Epoch 34/100	
1465/1465 ———————	1s 699us/step - loss: 6904454.5000
Epoch 35/100	
	1s 713us/step - loss: 3220841.5000
Epoch 36/100	
	1s 703us/step - loss: 1890163.2500
Epoch 37/100	1s 717us/step - loss: 3984372.5000
Epoch 38/100	15 /1/us/step = toss. 59045/2.5000
	1s 714us/step - loss: 3370170.0000
Epoch 39/100	20 /1:us/ stop toss: 55/01/010000
1465/1465 —————	1s 707us/step - loss: 2994106.5000
Epoch 40/100	
	1s 709us/step - loss: 4888650.5000
Epoch 41/100	
	1s 711us/step - loss: 1585355.3750
Epoch 42/100	1s 694us/step - loss: 1633520.5000
Epoch 43/100	15 094us/step - toss. 1035320.3000
	1s 717us/step - loss: 4755551.0000
Epoch 44/100	
	1s 729us/step - loss: 2627839.2500
Epoch 45/100	
	1s 709us/step - loss: 2328272.2500
Epoch 46/100	. 700 / 1 1005500 0000
	1s 706us/step - loss: 1805589.0000
Epoch 47/100	1s 708us/step - loss: 4256341.0000
Epoch 48/100	15 /00us/step - toss: 4230341.0000
	1s 702us/step - loss: 2608625.7500
Epoch 49/100	, ,
1465/1465 —————	1s 706us/step - loss: 5656424.0000
Epoch 50/100	
	1s 691us/step - loss: 2388173.2500
Epoch 51/100	1- (00/
Epoch 52/100	1s 689us/step - loss: 4111410.5000
•	1s 695us/step - loss: 4125130.0000
Epoch 53/100	23 033d3/3 ccp
	1s 703us/step - loss: 2219128.0000
Epoch 54/100	
	1s 688us/step - loss: 3664643.7500
Epoch 55/100	
	1s 703us/step - loss: 1185887.8750
Epoch 56/100	1e 670us/ston loss: 4020206 0000
1403/1403	1s 679us/step - loss: 4920286.0000

Frack F7/100	
Epoch 57/100	1s 681us/step - loss: 9243433.0000
Epoch 58/100	13 00103/31CP - 1033. 324343310000
	1s 683us/step - loss: 4455798.0000
Epoch 59/100	'
1465/1465	1s 715us/step - loss: 3369067.5000
Epoch 60/100	
	1s 680us/step - loss: 6205644.0000
Epoch 61/100	7 746 / / 3 2006262 2500
	1s 716us/step - loss: 3086363.2500
Epoch 62/100	1s 699us/step - loss: 6088784.5000
Epoch 63/100	13 03943/31Cp 1033. 0000/04.5000
	1s 695us/step - loss: 7768403.5000
Epoch 64/100	
1465/1465 ——————	1s 692us/step - loss: 3325437.2500
Epoch 65/100	
	1s 695us/step - loss: 1326913.0000
Epoch 66/100	1s 695us/step - loss: 3081377.7500
Epoch 67/100	15 095us/step - toss: 30813/7./300
1465/1465	1s 668us/step - loss: 5572977.5000
Epoch 68/100	20 00000,0000
	1s 686us/step - loss: 3520466.0000
Epoch 69/100	
	1s 681us/step - loss: 1475518.6250
Epoch 70/100	1- 700/ 1 2007020 0000
Epoch 71/100	1s 709us/step - loss: 2887038.0000
	1s 703us/step - loss: 2728911.0000
Epoch 72/100	23 / 03 d3 / 3 tep
	1s 697us/step - loss: 2865402.5000
Epoch 73/100	
	1s 687us/step - loss: 5144939.5000
Epoch 74/100	7 722 / 1
Epoch 75/100	1s 732us/step - loss: 5039342.0000
	1s 693us/step - loss: 3763134.7500
Epoch 76/100	23 03343/3tep (0331 3/031341/300
	1s 684us/step - loss: 5126591.5000
Epoch 77/100	
	1s 684us/step - loss: 2208127.5000
Epoch 78/100	
	1s 700us/step - loss: 2175148.2500
Epoch 79/100	1s 706us/step - loss: 8563492.0000
Epoch 80/100	13 /0003/31Cp - 1033. 030343210000
	1s 728us/step - loss: 5811388.5000
Epoch 81/100	
	1s 703us/step - loss: 6331392.5000

```
Epoch 82/100
1465/1465
                             — 1s 699us/step - loss: 2782270.7500
Epoch 83/100
                               - 1s 686us/step - loss: 4091366.7500
1465/1465 -
Epoch 84/100
                              - 1s 706us/step - loss: 6681912.0000
1465/1465 -
Epoch 85/100
1465/1465 -
                               - 1s 710us/step - loss: 2674859.7500
Epoch 86/100
1465/1465 -
                               • 1s 700us/step - loss: 1796475.1250
Epoch 87/100
1465/1465 -
                              - 1s 706us/step - loss: 1652846.3750
Epoch 88/100
1465/1465 -
                              - 1s 697us/step - loss: 2585953.5000
Epoch 89/100
1465/1465 -
                              - 1s 692us/step - loss: 4351964.0000
Epoch 90/100
1465/1465 -
                              - 1s 704us/step - loss: 3397490.0000
Epoch 91/100
1465/1465 -
                              - 1s 715us/step - loss: 3441662.0000
Epoch 92/100
1465/1465 -
                              - 1s 707us/step - loss: 2486053.0000
Epoch 93/100
1465/1465 -
                              - 1s 699us/step - loss: 5579828.5000
Epoch 94/100
1465/1465 -
                              - 1s 707us/step - loss: 4054066.0000
Epoch 95/100
1465/1465 -
                              - 1s 703us/step - loss: 1227067.6250
Epoch 96/100
1465/1465 -
                               - 1s 704us/step - loss: 3913709.2500
Epoch 97/100
1465/1465 -
                              - 1s 713us/step - loss: 5941370.5000
Epoch 98/100
1465/1465 -
                              - 1s 694us/step - loss: 3819549.2500
Epoch 99/100
1465/1465 -
                              - 1s 694us/step - loss: 5368060.5000
Epoch 100/100
1465/1465 —
                              - 1s 708us/step - loss: 3404950.2500
733/733 —
                            - 1s 710us/step
Epoch 1/100
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

1465/1465 — **2s** 709us/step - loss: 5870329.5000

Enach 2/100				
Epoch 2/100 1465/1465	1 c	681us/sten -	1000	1267881 3750
Epoch 3/100	13	001и3/31ер —	1033.	120/001.3/30
1465/1465 ————————————————————————————————————	1s	706us/step -	loss:	1066229.8750
Epoch 4/100				
1465/1465 ——————	1 s	685us/step -	loss:	1056993.5000
Epoch 5/100				
1465/1465 ——————	1 s	691us/step -	loss:	991025.7500
Epoch 6/100				
1465/1465 —————————	1 s	704us/step -	loss:	1042025.0625
Epoch 7/100	_	700 / /	-	4420224 0750
1465/1465 ————————————————————————————————————	15	/23us/step -	loss:	1138331.8/50
Epoch 8/100 1465/1465 ————————————————————————————————————	1.	70005/5+00	10001	10/0022 6250
Epoch 9/100	12	/wwws/step -	10551	1040033.0230
1465/1465 ————	1s	687us/sten -	loss:	1021917.3125
Epoch 10/100		007 dio, 0 dop	10001	
1465/1465	1s	729us/step -	loss:	1145858.3750
Epoch 11/100				
1465/1465 ————————	1 s	712us/step -	loss:	1013614.8750
Epoch 12/100	_		-	
1465/1465 ————————————————————————————————————	1 s	/00us/step -	loss:	1024/83.8/50
Epoch 13/100 1465/1465 ————————————————————————————————————	1.	701us/stop	10001	1007000 0000
Epoch 14/100	12	/vius/step -	10551	100/099.0000
1465/1465 —————	1s	672us/step -	loss:	990427.6875
Epoch 15/100		o, =0.5, 5.15p	10001	
1465/1465	1 s	708us/step -	loss:	1011626.8750
Epoch 16/100				
1465/1465 ————————————————————————————————————	1 s	683us/step -	loss:	1092155.6250
Epoch 17/100		676	1	004440 2500
1465/1465 — Epoch 18/100	IS	6/bus/step -	LOSS:	994448.2500
1465/1465 —————	1ς	665us/sten –	1055	1082383.1250
Epoch 19/100		00343, 3 ccp		100230311230
1465/1465	1s	683us/step -	loss:	1017772.5625
Epoch 20/100				
1465/1465 ———————	1 s	677us/step -	loss:	1049375.0000
Epoch 21/100	_		-	
1465/1465 ————————————————————————————————————	1 s	/08us/step -	loss:	10/1418.0000
Epoch 22/100 1465/1465 ————————————————————————————————————	1.	605us/stop	10001	1010646 7500
Epoch 23/100	12	093us/step =	1055.	1010040.7300
1465/1465 —————	1s	671us/step -	loss:	1113264.1250
Epoch 24/100				
1465/1465 ————————————————————————————————————	1 s	694us/step -	loss:	1012793.8125
Epoch 25/100				
1465/1465 —————	1 s	694us/step -	loss:	1030776.6250
Epoch 26/100		CO 4 / . !	1.	000047 5000
1465/1465 ——————	ls	684us/step -	loss:	98824/.5000

Enach 27/100				
Epoch 27/100 1465/1465	1 c	607us/sten –	1066.	1070653 8750
Epoch 28/100	-5	037 d37 3 ccp		107005510750
1465/1465	1 s	699us/step -	loss:	959694.3750
Epoch 29/100				
1465/1465	1 s	908us/step –	loss:	1006499.5000
Epoch 30/100				
1465/1465	1 s	681us/step –	loss:	1016171.0625
Epoch 31/100	1.	700/atan	1	1024520 1075
1465/1465 — Epoch 32/100	15	709us/step -	toss:	1024529.1875
1465/1465 —————	1s	696us/sten -	loss:	1004832.3125
Epoch 33/100		σσασ, στορ		100103213123
1465/1465 —————	1 s	683us/step -	loss:	1038315.9375
Epoch 34/100				
1465/1465 —————	1 s	681us/step -	loss:	993880.4375
Epoch 35/100	_		_	
1465/1465 ————————————————————————————————————	1s	694us/step –	loss:	10418/2./500
Epoch 36/100 1465/1465	1 c	710us/sten -	1000	052000 1250
Epoch 37/100	13	/1003/31Cp	(033.	95299011250
1465/1465	1 s	696us/step -	loss:	1003958.2500
Epoch 38/100		•		
1465/1465 —————	1 s	683us/step -	loss:	992054.2500
Epoch 39/100			_	
1465/1465	1 s	690us/step –	loss:	1020103.0000
Epoch 40/100 1465/1465	1.	70/us/stop	10001	1055267 1250
Epoch 41/100	12	704us/step -	1055.	1033207.1230
1465/1465 ————	1s	672us/step -	loss:	1048106.1875
Epoch 42/100		, ,		
1465/1465 —————	1 s	676us/step –	loss:	972673.3125
Epoch 43/100			_	
1465/1465	1 s	706us/step –	loss:	1037949.2500
Epoch 44/100 1465/1465 ————————————————————————————————————	1.	607us/stan	10001	046072 6250
Epoch 45/100	12	00/us/step -	10551	940073.0230
1465/1465	1s	707us/step -	loss:	1037835.9375
Epoch 46/100				
1465/1465 —————	1 s	681us/step -	loss:	1001770.0000
Epoch 47/100				
1465/1465 —	1 s	693us/step –	loss:	1063399.8750
Epoch 48/100	1.	602/atan	1	075222 5625
1465/1465 — Epoch 49/100	TS	ogzus/step -	1055:	9/3222.3023
1465/1465 ————	1s	695us/sten –	loss:	1045791.7500
Epoch 50/100		13545, 5 CCP	-0001	
1465/1465	1 s	693us/step –	loss:	1011259.3125
Epoch 51/100				
1465/1465 —————	1 s	676us/step -	loss:	959920.5625

Frank F2 /100				
Epoch 52/100 1465/1465 ————————————————————————————————————	1 c	600us/sten -	1000	1094410 0000
Epoch 53/100	13	09003/31Cp -	1033.	100441910000
1465/1465 —————	1s	696us/step -	loss:	1057353.7500
Epoch 54/100				
1465/1465 ————————	1 s	685us/step -	loss:	962623.8125
Epoch 55/100				
1465/1465 —————	1 s	688us/step -	loss:	1193271.6250
Epoch 56/100				
1465/1465 —	1 s	685us/step -	loss:	978531.5000
Epoch 57/100		670 / - 1	1	056303 4350
1465/1465 ————————————————————————————————————	IS	6/0us/step -	loss:	956303.1250
Epoch 58/100 1465/1465 ————————————————————————————————————	1.	702us /stop	10001	1012045 6075
Epoch 59/100	13	/03us/step -	1055.	1012045.0075
1465/1465 ————	1s	690us/step -	loss:	980775.5625
Epoch 60/100		от са, с тор	10001	000170100_0
1465/1465 ————————	1 s	655us/step -	loss:	1083337.2500
Epoch 61/100				
1465/1465 —————	1 s	682us/step -	loss:	1031155.8750
Epoch 62/100	_	606 ()	-	4400744 6050
1465/1465 ————————————————————————————————————	15	686us/step -	loss:	1180/41.6250
Epoch 63/100 1465/1465 ————————————————————————————————————	1.	70/us/stop	10001	1062525 0750
Epoch 64/100	13	704us/step -	1055.	1003323.0730
1465/1465 —————	1s	683us/step -	loss:	1028138.3750
Epoch 65/100		, ,		
1465/1465 ————————	1 s	687us/step -	loss:	1001707.8750
Epoch 66/100				
1465/1465	1 s	692us/step -	loss:	985240.1875
Epoch 67/100 1465/1465 ————————————————————————————————————	1.	670 /a+an	1	000222 0750
Epoch 68/100	12	07ous/step -	1055:	900323:0730
1465/1465 ————	1s	675us/step -	loss:	963103.0625
Epoch 69/100		,		
1465/1465	1 s	705us/step -	loss:	1044414.6875
Epoch 70/100				
1465/1465 —	1 s	680us/step –	loss:	1037042.1250
Epoch 71/100	1.	CO1 /a+a-	1	1007220 0250
1465/1465 ————————————————————————————————————	IS	691us/step -	loss:	106/329.6250
1465/1465 ————	1 c	676us/sten -	1055.	1011063 2500
Epoch 73/100		070d3/3ccp		101100312300
1465/1465 —————	1s	718us/step -	loss:	948455.2500
Epoch 74/100				
1465/1465 ——————	1 s	688us/step -	loss:	1104916.1250
Epoch 75/100	_		-	444000
1465/1465 ————————————————————————————————————	1 s	690us/step -	loss:	1046939.9375
Epoch 76/100 1465/1465 ————————————————————————————————————	1.	680us/s+an	1000:	1022240 2500
1405/1405	12	oowus/step -	1055:	1022240.2200

Epoch 77/100 1465/1465 ————————————————————————————————————	1c	685us/sten	_	1055.	986468 6250
Epoch 78/100	-5	003и3/ 3 сер			30040010230
1465/1465 ————	1s	673us/step	_	loss:	1002127.4375
Epoch 79/100					
1465/1465	1s	706us/step	_	loss:	979781.1250
Epoch 80/100					
1465/1465 ———————	1 s	693us/step	_	loss:	1103080.2500
Epoch 81/100					
1465/1465 ——————	1 s	674us/step	_	loss:	1027114.7500
Epoch 82/100					
1465/1465 ———————	1 s	672us/step	_	loss:	978591.8125
Epoch 83/100				_	
1465/1465 —	1s	679us/step	_	loss:	1070947.6250
Epoch 84/100		740 / 1		,	4044370 4350
1465/1465 ————————————————————————————————————	IS	/18us/step	_	LOSS:	10143/8.1250
Epoch 85/100 1465/1465 ————————————————————————————————————	1.	60746/6+00		10001	1012200 2125
Epoch 86/100	12	oo/us/step	_	10551	1012390:3123
1465/1465 ————	1c	730us/sten	_	1055.	1031014 3750
Epoch 87/100	-5	75545,5100			103101413730
1465/1465	1s	748us/step	_	loss:	1016627,1875
Epoch 88/100		,			
1465/1465 —————	1s	714us/step	_	loss:	1076300.5000
Epoch 89/100					
1465/1465	1 s	987us/step	_	loss:	1033185.7500
Epoch 90/100					
1465/1465 ——————	1s	721us/step	_	loss:	1069457.5000
Epoch 91/100	_			-	
1465/1465 ————————————————————————————————————	1s	685us/step	_	loss:	1046032.3125
Epoch 92/100	1.	CE2 /a+a=		1	000001 0275
1465/1465 ————————————————————————————————————	15	obbus/step	_	toss:	998981.9375
Epoch 93/100 1465/1465 ————————————————————————————————————	16	6/Aus/sten	_	1000	027523 7500
Epoch 94/100	13	040и3/31Ср		(033.	30730317300
1465/1465 ————	1s	693us/sten	_	loss:	1010334.0000
Epoch 95/100		00000, 010p			101000
1465/1465 ————	1s	639us/step	_	loss:	1009813.1250
Epoch 96/100		·			
1465/1465	1 s	646us/step	_	loss:	999252.1250
Epoch 97/100					
1465/1465 ——————	1 s	632us/step	_	loss:	991683.8750
Epoch 98/100					
1465/1465 ————————	1 s	636us/step	_	loss:	1019405.6250
Epoch 99/100	_	646 ()		,	1000000 010=
1465/1465 ————————————————————————————————————	ls	646us/step	_	loss:	1006968.3125
Epoch 100/100	1 -	67440/0405		1000	1010074 1250
1465/1465 ————————————————————————————————————			_	LUSS:	10190/4.1250
Fpoch 1/100	5 59	ins/sreh			
LPOCII 1/ 100					

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

3aper (/!tnre(acervrey_re	9	arizer acer		. , 9 .	acar izci ji i i kwarg.
1465/1465					
Epoch 2/100					
1465/1465 —————	1 s	640us/step	-	loss:	2220050.2500
Epoch 3/100					
1465/1465 —————	1 s	633us/step	-	loss:	3939431.2500
Epoch 4/100				_	
1465/1465 —————	1 s	640us/step	-	loss:	2833594.2500
Epoch 5/100	_			_	
1465/1465	1 s	642us/step	-	loss:	3443725.5000
Epoch 6/100		627 ()		,	6422040 0000
1465/1465	ls	62/us/step	_	loss:	6422918.0000
Epoch 7/100	1 -	CEO /		1	1442050 6250
1465/1465 ————————————————————————————————————	IS	650US/STEP	_	LOSS:	1443059.6250
Epoch 8/100	1.	620us/ston		10001	1601060 0000
1465/1465 ————————————————————————————————————	15	630us/step	_	toss:	4094908.0000
Epoch 9/100	1.	624us/stop		10001	2552627 5000
1465/1465 — Epoch 10/100	12	024uS/Step	_	10551	2555057.5000
1465/1465 ————	1 c	62/115/sten	_	1000	3665206 0000
Epoch 11/100	13	024u3/3tep		1033.	300320010000
1465/1465 ————	1 c	673us/sten	_	1055.	6979729 5000
Epoch 12/100	13	0/3d3/3tcp			03/3/2313000
1465/1465	1s	834us/step	_	loss:	2858580.5000
Epoch 13/100		00 100, 0 10p			
1465/1465 —————	1s	704us/step	_	loss:	5811224.5000
Epoch 14/100					
1465/1465 ——————	1 s	622us/step	_	loss:	2332867.0000
Epoch 15/100					
1465/1465 —————————	1 s	622us/step	_	loss:	3045258.2500
Epoch 16/100					
1465/1465 —————	1 s	613us/step	-	loss:	2559381.7500
Epoch 17/100					
1465/1465 ——————	1 s	618us/step	-	loss:	2977001.2500
Epoch 18/100					
1465/1465 ——————	1 s	630us/step	-	loss:	5185314.0000
Epoch 19/100				_	
1465/1465	1 s	634us/step	-	loss:	4093124.0000
Epoch 20/100	_			-	
1465/1465	1 s	618us/step	-	loss:	4168922.7500
Epoch 21/100		610		7	2675007 5000
1465/1465 ————————————————————————————————————	ls	o18us/step	-	loss:	26/588/ . 5000

- L 00 /400	
Epoch 22/100	1s 624us/step - loss: 4118726.5000
Epoch 23/100	15 024us/step - toss. 4110/20.5000
	1s 614us/step - loss: 2067125.7500
Epoch 24/100	
	1s 627us/step - loss: 2032064.5000
Epoch 25/100	
	1s 617us/step - loss: 4379880.0000
Epoch 26/100	
	1s 620us/step - loss: 6588388.5000
Epoch 27/100	1s 623us/step - loss: 5588815.5000
Epoch 28/100	15 023us/step - toss. 3300013.3000
	1s 614us/step - loss: 4653903.0000
Epoch 29/100	
1465/1465 ———————	1s 618us/step - loss: 8141001.0000
Epoch 30/100	
	1s 623us/step - loss: 2388393.5000
Epoch 31/100	1- (200-/
	1s 620us/step - loss: 2577898.0000
Epoch 32/100	1s 635us/step - loss: 3850264.0000
Epoch 33/100	13 05503/31CP 1033: 5050204:0000
	1s 650us/step - loss: 2731050.0000
Epoch 34/100	
	1s 619us/step - loss: 2473841.5000
Epoch 35/100	
	1s 618us/step - loss: 5704266.0000
Epoch 36/100	1s 636us/step - loss: 1888076.6250
Epoch 37/100	15 030us/step - toss: 10000/0.0230
	1s 613us/step - loss: 4636861.0000
Epoch 38/100	
1465/1465	1s 621us/step - loss: 3578739.2500
Epoch 39/100	
	1s 622us/step - loss: 2140043.2500
Epoch 40/100	1. 642/atan lasa. 6001062 0000
Epoch 41/100	1s 642us/step - loss: 6081862.0000
	1s 633us/step - loss: 2598284.7500
Epoch 42/100	23 033u3/3tcp to33: 23302041/300
•	1s 627us/step - loss: 1127327.0000
Epoch 43/100	•
1465/1465 ——————	1s 626us/step - loss: 5060618.5000
Epoch 44/100	
	1s 622us/step - loss: 2992399.2500
Epoch 45/100	1c 610uc/ston loss, 1004451 5000
Epoch 46/100	1s 619us/step - loss: 1994451.5000
	1s 619us/step - loss: 3411737.7500
1703/ 1703 ·	25 01303/3 CCp (033: 3411/3/1/300

Epoch 47/100	1s 617us/step - loss: 2895160.2500
Epoch 48/100	15 01/us/step - toss: 2093100.2300
	1s 621us/step - loss: 4078302.7500
Epoch 49/100	
1465/1465 —————	1s 623us/step - loss: 3042266.2500
Epoch 50/100	·
	1s 618us/step - loss: 5605993.0000
Epoch 51/100	
	1s 634us/step - loss: 2532023.2500
Epoch 52/100	1s 626us/step - loss: 4903409.5000
Epoch 53/100	15 020us/step - toss. 4903409.3000
	1s 617us/step - loss: 3255291.2500
Epoch 54/100	
•	1s 618us/step - loss: 5686449.5000
Epoch 55/100	
	1s 614us/step - loss: 1269611.3750
Epoch 56/100	1- (24)-/
Epoch 57/100	1s 621us/step - loss: 2045789.3750
	1s 620us/step - loss: 3951136.5000
Epoch 58/100	13 02003/31CP 1033: 3331130:3000
	1s 617us/step - loss: 1461610.1250
Epoch 59/100	
1465/1465 ——————	1s 621us/step - loss: 4556629.5000
Epoch 60/100	
	1s 615us/step - loss: 1367280.1250
Epoch 61/100	1s 621us/step - loss: 3184628.0000
Epoch 62/100	15 021u5/5tep - t055: 3184028.0000
•	1s 620us/step - loss: 1869061.0000
Epoch 63/100	
1465/1465 ———————	1s 622us/step - loss: 5528207.5000
Epoch 64/100	
	1s 615us/step - loss: 4406213.5000
Epoch 65/100	1. 616.02/2422 1222. 2000172 0000
Epoch 66/100	1s 616us/step - loss: 3998172.0000
	1s 615us/step - loss: 5417993.5000
Epoch 67/100	23 01343/3 CCp
•	1s 616us/step - loss: 2308369.5000
Epoch 68/100	·
	1s 615us/step - loss: 3240022.7500
Epoch 69/100	
	1s 656us/step - loss: 7854517.5000
Epoch 70/100	1s 640us/step - loss: 4353861.5000
Epoch 71/100	15 040US/Step - (055: 4333801.3000
	1s 625us/step - loss: 4848466.0000
	25 52545, 5tep 10551 404040010000

Fr 12 /100	
Epoch 72/100	1s 622us/step - loss: 6288797.5000
Epoch 73/100	15 022us/step - toss. 0200/9/13000
	1s 612us/step - loss: 9110684.0000
Epoch 74/100	
1465/1465 ———————	1s 618us/step - loss: 2578945.0000
Epoch 75/100	
	1s 615us/step - loss: 2771504.5000
Epoch 76/100	1 042 / 1 2042040 2500
	1s 613us/step - loss: 2942040.2500
Epoch 77/100	1s 615us/step - loss: 2386820.0000
Epoch 78/100	13 01303/31Cp 1033. 230002010000
	1s 611us/step - loss: 3641236.7500
Epoch 79/100	
1465/1465 ———————	1s 621us/step - loss: 3576683.7500
Epoch 80/100	
	1s 614us/step - loss: 1976985.5000
Epoch 81/100	1s 624us/step - loss: 4520756.5000
Epoch 82/100	1s 624us/step - loss: 4520/56.5000
	1s 623us/step - loss: 6442450.5000
Epoch 83/100	23 023u3/3tep (0331 044243013000
	1s 641us/step - loss: 2311847.0000
Epoch 84/100	
	1s 626us/step - loss: 2786822.0000
Epoch 85/100	
	1s 634us/step - loss: 3231995.5000
Epoch 86/100	1s 620us/step - loss: 6706145.5000
Epoch 87/100	15 02005/Step - toss. 0/00143.3000
	1s 611us/step - loss: 3381921.5000
Epoch 88/100	
1465/1465 ———————	1s 616us/step - loss: 1633661.6250
Epoch 89/100	
	1s 622us/step - loss: 3141224.2500
Epoch 90/100	1. 610/atan 1 2757247 2500
Epoch 91/100	1s 618us/step - loss: 2757247.2500
	1s 618us/step - loss: 2475888.2500
Epoch 92/100	23 01003/3tep (0331 24/300012300
	1s 613us/step - loss: 1750153.3750
Epoch 93/100	•
	1s 613us/step - loss: 1803636.8750
Epoch 94/100	
	1s 614us/step - loss: 2291252.7500
Epoch 95/100	1s 623us/step - loss: 1480697.7500
Epoch 96/100	15 023u5/5tep - t055: 148009/./500
	1s 620us/step - loss: 3811882.2500
	25 32043, 310p 10331 301100212300

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
4395/4395 -
                       3s 636us/step - loss: 5063611.0000
Epoch 2/75
                           3s 650us/step - loss: 3041939.0000
4395/4395 -
Epoch 3/75
4395/4395 -
                           3s 640us/step - loss: 6037871.5000
Epoch 4/75
4395/4395 -
                            — 3s 639us/step - loss: 1361148.0000
Epoch 5/75
4395/4395 -
                             - 3s 644us/step - loss: 1174961.5000
Epoch 6/75
4395/4395 -
                           — 3s 647us/step - loss: 1828405.6250
Epoch 7/75
                          3s 643us/step - loss: 5505457.5000
4395/4395 -
Epoch 8/75
4395/4395 -
                             - 3s 652us/step - loss: 1753390.1250
Epoch 9/75
4395/4395 -
                            - 3s 654us/step - loss: 2348000.0000
Epoch 10/75
                            - 3s 640us/step - loss: 3273968.7500
4395/4395 -
Epoch 11/75
4395/4395 -
                             - 3s 651us/step - loss: 3808050.7500
Epoch 12/75
4395/4395 -
                             - 3s 644us/step - loss: 2181924.7500
Epoch 13/75
4395/4395 -
                           3s 670us/step - loss: 2479104.5000
Epoch 14/75
4395/4395 -
                             - 3s 656us/step - loss: 1381111.1250
Epoch 15/75
4395/4395 -
                           3s 652us/step - loss: 1869371.3750
Epoch 16/75
```

- 3s 659us/step - loss: 1880631.8750

4395/4395 -

Epoch 17/75						
4395/4395 ————	35	658us/sten	_	loss:	3211132.000	a
Epoch 18/75		05045, 510p			32111321000	•
4395/4395	3s	655us/step	_	loss:	2725587.500	0
Epoch 19/75						
4395/4395 —————	3s	662us/step	_	loss:	1848941.625	0
Epoch 20/75		·				
4395/4395 ——————	3s	676us/step	_	loss:	1428921.875	0
Epoch 21/75						
4395/4395 —————	3s	664us/step	-	loss:	2053088.500	0
Epoch 22/75	_			_		
4395/4395	3s	672us/step	_	loss:	1886276.125	0
Epoch 23/75	2 -	C00 (-+		1	252525 250	_
4395/4395 ————————————————————————————————————	35	680us/step	_	loss:	2525225.250	0
Epoch 24/75 4395/4395	2.	656us /stop		1000	2460741 250	Ω
Epoch 25/75	25	030us/step	_	1055.	2400741.230	U
4395/4395 ————	35	655us/sten	_	1055.	3698056.750	a
Epoch 26/75	33	033u3/3tep			30300301730	•
4395/4395 ————	3s	660us/step	_	loss:	5012451.500	0
Epoch 27/75		, ,				
4395/4395 —————	3s	658us/step	_	loss:	2373076.500	0
Epoch 28/75						
4395/4395 ——————	3s	665us/step	_	loss:	4283889.000	0
Epoch 29/75						
4395/4395 ———————	3s	656us/step	-	loss:	2547561.750	0
Epoch 30/75	_			_		_
4395/4395 ————————————————————————————————————	3s	670us/step	-	loss:	1250429.875	0
Epoch 31/75	2-	665/2+25		1	2270000 000	0
4395/4395 — Epoch 32/75	35	oosus/step	_	toss:	23/0998.000	U
4395/4395	3¢	662us/sten	_	1000	21/860/ 250	a
Epoch 33/75	J 3	002u3/3tcp			21400041230	U
4395/4395	3s	643us/step	_	loss:	1402691.750	0
Epoch 34/75		,				
4395/4395 ——————	3s	665us/step	_	loss:	2836724.000	0
Epoch 35/75						
4395/4395 ——————	3s	651us/step	-	loss:	3354184.500	0
Epoch 36/75						
4395/4395	3s	661us/step	-	loss:	4458285.000	0
Epoch 37/75	_	650 ()		-	2052222	_
4395/4395 ————————————————————————————————————	35	659us/step	_	loss:	2053929.250	0
Epoch 38/75	2.0	6E /us /s+on		10001	2000070 250	Ω
4395/4395 — Epoch 39/75	55	obaus/step	_	1055	∠₩₩₩₩ 25₩	U
4395/4395 ————————————————————————————————————	3¢	636us/sten	_	1055.	3843366 750	a
Epoch 40/75	J 3	03003/31СР		.0331	50-55001750	J
4395/4395 ————	3s	653us/sten	_	loss:	2306782.000	0
Epoch 41/75						_
4395/4395 ————	3s	667us/step	_	loss:	1882255.750	0
		•				

For all 12 /75					
Epoch 42/75 4395/4395 ————————————————————————————————————	20	62/us/ston		10001	1571/20 1250
Epoch 43/75	25	034us/step	_	1055.	13/1429.1230
4395/4395 ————	3s	647us/step	_	loss:	2432744.2500
Epoch 44/75					
4395/4395 ———————	3s	645us/step	-	loss:	2226796.0000
Epoch 45/75					
4395/4395 —————————	3s	657us/step	-	loss:	2993887.7500
Epoch 46/75	2-	C 4 4 / a + a		1	1040222 1250
4395/4395 — Epoch 47/75	35	644us/step	_	LOSS:	1940332.1250
4395/4395 ————	35	646us/sten	_	1055.	3415840 0000
Epoch 48/75	33	040и3/31ср			341304010000
4395/4395 ————	3s	665us/step	_	loss:	1708472.5000
Epoch 49/75					
4395/4395 ——————	3s	654us/step	-	loss:	3704602.7500
Epoch 50/75	_			_	
4395/4395 —	3s	640us/step	-	loss:	1589785.5000
Epoch 51/75 4395/4395	20	671us /s+op		1000	1611264 7500
Epoch 52/75	25	0/1us/step	_	1055.	1011204.7300
4395/4395 ————	3s	651us/step	_	loss:	2112267.2500
Epoch 53/75					
4395/4395	3s	654us/step	_	loss:	3047422.5000
Epoch 54/75					
4395/4395 —————	3s	652us/step	-	loss:	1754063.2500
Epoch 55/75	_	640 / 1		-	4000433 5000
4395/4395 ————————————————————————————————————	35	648us/step	_	loss:	4989432.5000
Epoch 56/75 4395/4395	35	642us/sten	_	1055	3814399.5000
Epoch 57/75	33	0+2и3/ 3 сер			301433313000
4395/4395	3s	639us/step	_	loss:	1380144.2500
Epoch 58/75					
4395/4395 ——————	3s	664us/step	-	loss:	1272756.8750
Epoch 59/75	_			_	
4395/4395 ————————————————————————————————————	3s	650us/step	-	loss:	1640955.2500
Epoch 60/75 4395/4395	3¢	650us/sten	_	1000	1712007 7500
Epoch 61/75	23	039u3/31cp		1033.	1/1200/1/500
4395/4395	3s	670us/step	_	loss:	3616899.5000
Epoch 62/75		, , , , ,			
4395/4395 ——————	3s	654us/step	-	loss:	1601476.7500
Epoch 63/75					
4395/4395	3s	651us/step	-	loss:	3009925.7500
Epoch 64/75	2-	649 / 5 + 5 =		1000:	2160100 0000
4395/4395 — Epoch 65/75	55	04ous/step	_	LUSS:	▼100108.0000
4395/4395 ————————————————————————————————————	3¢	647us/sten	_	lossi	3810270.7500
Epoch 66/75	J J	э., аз, эсер		.0331	551527517500
4395/4395 ————	3s	660us/step	_	loss:	1577675.1250

```
Epoch 67/75
4395/4395 -
                          ---- 3s 646us/step - loss: 3930404.0000
Epoch 68/75
4395/4395 -
                           — 3s 656us/step - loss: 1571116.2500
Epoch 69/75
                             - 3s 641us/step - loss: 2461969.0000
4395/4395 -
Epoch 70/75
4395/4395 -
                             - 3s 640us/step - loss: 1684883.2500
Epoch 71/75
4395/4395 -
                             - 3s 646us/step - loss: 3062218.2500
Epoch 72/75
4395/4395 -
                           3s 646us/step - loss: 2675875.2500
Epoch 73/75
4395/4395 -
                           --- 3s 649us/step - loss: 2385947.7500
Epoch 74/75
                           --- 3s 639us/step - loss: 5071559.5000
4395/4395 -
Epoch 75/75
4395/4395 —
                         ---- 3s 655us/step - loss: 3363907.0000
Best Parameters: {'model__neurons_per_layer': [128, 128], 'epochs': 75, 'bat
ch_size': 32}
Optimal Neurons Per Layer: [128, 128]
Best Negative MSE (CV): -2775768.216699162
1099/1099 -
                         1s 629us/step
Keras Test MSE: 1023729.0822174851
Keras Test RMSE: 1011.7949803282704
```

Finding the Most Important Features

New Model with Reduced Features

```
In [52]: top_7_features = ["total_outstanding_orders", "total_onshift_dashers", "total
                           "estimated order place duration", "max item price", "estim
         X_train_top_features = X_train_scaled[:, ranked_features[:7]]
         X_test_top_features = X_test_scaled[:, ranked_features[:7]]
In [56]: def create_reduced_model(layers_config = [32], activation_function = "relu")
             model reduced = Sequential()
             model_reduced.add(Dense(layers_config[0], activation = activation_functi
             for neurons in layers_config[1:]:
                 model reduced.add(Dense(neurons, activation = activation_function))
             model reduced.add(Dense(1))
             model reduced.compile(optimizer = "adam", loss = "mean squared error")
             return model reduced
         keras model reduced = KerasRegressor(build fn=create reduced model, verbose=
         param grid reduced = {
             "model_layers_config": [[3], [5], [7], [32], [64], [128], [32, 32], [12
                                       [32, 16], [32, 16, 8], [128, 64, 32], [64, 64,
         random_search_reduced = RandomizedSearchCV(estimator = keras_model_reduced,
                                                     cv = 3, scoring = "neg_mean_squar
         random_search_reduced.fit(X_train_top_features, y_train)
         best_params_reduced = random_search_reduced.best_params_
         print("Best Parameters (Reduced):", best_params_reduced)
         print("Optimal Layers Config (Reduced):", best_params_reduced["model__layers
         print("Best Negative MSE (CV):", random_search_reduced.best_score_)
         best_reduced_model = random_search_reduced.best_estimator_
         test predictions reduced = best reduced model.predict(X test top features)
         test_mse_reduced = mean_squared_error(y_test, test_predictions_reduced)
         test rmse reduced = np.sgrt(test mse reduced)
         print(f"Reduced Model Test MSE: {test_mse_reduced}")
```

print(f"Reduced Model Test RMSE: {test_rmse_reduced}")

Epoch 1/50

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super(/!init(detivity_re					
2930/2930 ————	4s	871us/step	_	loss:	6699607.0000
Epoch 2/50					
2930/2930 ————	2s	837us/step	_	loss:	3380297.2500
Epoch 3/50					
2930/2930 —————	2s	840us/step	_	loss:	3219995.0000
Epoch 4/50	_			_	
2930/2930 ————	3s	853us/step	-	loss:	3934462.5000
Epoch 5/50					
2930/2930 ————	3s	874us/step	_	loss:	1981510.0000
Epoch 6/50	_			_	
2930/2930 ————	2s	842us/step	-	loss:	4801854.0000
Epoch 7/50	_			_	
2930/2930 ————	3s	850us/step	-	loss:	1395364.2500
Epoch 8/50	_				2424-24
2930/2930 ————	3s	881us/step	-	loss:	3181760.2500
Epoch 9/50	_			_	
2930/2930 ————	3s	846us/step	-	loss:	5623115.5000
Epoch 10/50	_	050 ()		,	2242245 7522
2930/2930 ————	3s	852us/step	-	loss:	2210845./500
Epoch 11/50	_	054		,	264 4672 5000
2930/2930 —	35	854us/step	-	loss:	26146/8.5000
Epoch 12/50	_	060 / 1		,	2000046 0000
2930/2930 —	35	862us/step	_	loss:	3988946.0000
Epoch 13/50	2-	022/-+		1	7747020 0000
2930/2930 —	25	833us/step	_	LOSS:	//4/039.0000
Epoch 14/50 2930/2930 ————————————————————————————————————	2-	054/atan		1	2500067 0000
	35	854uS/Step	_	toss:	3599807.0000
Epoch 15/50 2930/2930 ————————————————————————————————————	2.	04546/6+00		10001	4464071 0000
Epoch 16/50	35	045us/step	_	10551	44040/1.0000
2930/2930 ————	26	963us /s+on		10001	2/50650 0000
Epoch 17/50	25	003us/step	_	1055.	3430030.0000
2930/2930 ————	3.	953us/stan	_	1000	3506052 7500
Epoch 18/50	JS	02202/216h	_	.055.	223002217300
•	3 c	85311c/cten	_	1000	6154900.5000
Epoch 19/50	23	02203/31Ch	_	.033.	012430013000
2930/2930 ————	3¢	856us/sten	_	1066.	2445912.5000
Epoch 20/50	23	03003/3CCp		.0331	Z-7331213000
LPOCH 20/30					

2930/2930 —————	3s	892us/step -	· loss:	2135393.0000
Epoch 21/50				
2930/2930 —————	3s	853us/step -	· loss:	3307901.7500
Epoch 22/50	_		_	
2930/2930 ————	· 3s	848us/step -	· loss:	3484523.7500
Epoch 23/50	_	0.44	,	2264572 0000
2930/2930 ————————————————————————————————————	· 2S	841us/step -	· LOSS:	33615/2.0000
Epoch 24/50 2930/2930 ————————————————————————————————————	26	0/5uc/ston	10001	1600760 6250
Epoch 25/50	25	043us/step -	. (055.	1090/09:0230
2930/2930 ————	25	843us/sten -	· loss:	2048855.3750
Epoch 26/50		0.545, 5166		20.000010700
2930/2930 —————	2s	845us/step -	loss:	8556043.0000
Epoch 27/50				
2930/2930 ——————	2 s	828us/step -	· loss:	1546042.8750
Epoch 28/50				
2930/2930 —————	3s	853us/step -	· loss:	3240837.7500
Epoch 29/50	_		_	
2930/2930 ————————————————————————————————————	2s	830us/step -	· loss:	1154321.8750
Epoch 30/50 2930/2930 ————————————————————————————————————	2-	020/-+	1	2420207 2500
Epoch 31/50	25	828us/step -	· LOSS:	2420387.2500
2930/2930 ————	. 2c	83/us/sten -	lossi	121/1001 0000
Epoch 32/50	23	034u3/31cp	(033.	421430110000
2930/2930 ————	2s	831us/step -	· loss:	4156455.5000
Epoch 33/50				
2930/2930 ————————	2 s	826us/step -	· loss:	2811778.5000
Epoch 34/50				
2930/2930 ————	2 s	827us/step -	· loss:	1551269.0000
Epoch 35/50	_	024 / 1	,	1061047 2750
2930/2930 ————————————————————————————————————	25	831us/step -	· loss:	186184/.3/50
Epoch 36/50 2930/2930 ————————————————————————————————————	3.	9/7us/sten -	10001	5066131.0000
Epoch 37/50	- 33	047u3/3tcp	(033.	300013110000
2930/2930 ————	2s	838us/step -	· loss:	11401358.0000
Epoch 38/50		, ,		
2930/2930 ——————	2 s	828us/step -	· loss:	2573215.0000
Epoch 39/50				
2930/2930 ————	2s	833us/step -	· loss:	5826117.5000
Epoch 40/50	3 -	000	1	2266002 7500
2930/2930 — Epoch 41/50	35	906us/step -	· LOSS:	2200093.7500
2930/2930 —————	. 2c	8/2us/sten -	lossi	2584474 2500
Epoch 42/50	23	0+2u3/3tcp	(0331	250447412500
2930/2930 ————	2s	832us/step -	loss:	8693837.0000
Epoch 43/50	_	-,	-	
2930/2930 —————	2s	833us/step -	loss:	1735393.2500
Epoch 44/50				
2930/2930 —————	2s	833us/step -	· loss:	5806075.5000
Epoch 45/50				

```
2s 834us/step - loss: 7312114.5000
2930/2930 -
Epoch 46/50
2930/2930 -
                         2s 842us/step - loss: 2139715.7500
Epoch 47/50
2930/2930 -
                           - 2s 842us/step - loss: 4272235.0000
Epoch 48/50
2930/2930 -
                         2s 836us/step - loss: 4151207.2500
Epoch 49/50
2930/2930 -
                        3s 857us/step - loss: 3073664.7500
Epoch 50/50
               2s 834us/step - loss: 8418387.0000
2930/2930 -
1465/1465 -
                         1s 746us/step
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

```
2930/2930 ———
                    4s 846us/step - loss: 5287451.0000
Epoch 2/50
                         2s 838us/step - loss: 1264657.5000
2930/2930 -
Epoch 3/50
2930/2930 -
                     2s 833us/step - loss: 1090898.8750
Epoch 4/50
2930/2930 -
                         2s 827us/step - loss: 1069380.7500
Epoch 5/50
2930/2930 -
                          — 2s 827us/step - loss: 1040984.4375
Epoch 6/50
2930/2930 -
                           — 2s 828us/step - loss: 996823.6875
Epoch 7/50
2930/2930 -
                        2s 828us/step - loss: 1011693.5625
Epoch 8/50
2930/2930 -
                         2s 833us/step - loss: 1138218.6250
Epoch 9/50
2930/2930 -
                           — 3s 849us/step - loss: 1039765.9375
Epoch 10/50
2930/2930 -
                        2s 841us/step - loss: 1054921.6250
Epoch 11/50
2930/2930 -
                           — 2s 843us/step - loss: 1037037.6875
Epoch 12/50
2930/2930 -
                         2s 826us/step - loss: 1147011.2500
Epoch 13/50
                          2s 829us/step - loss: 1033311.8125
2930/2930 -
Epoch 14/50
2930/2930 -
                        2s 841us/step - loss: 1072186.6250
Epoch 15/50
```

2930/2930	2s	844us/step	-	loss:	1061463.5000
Epoch 16/50 2930/2930 ————————————————————————————————————	2s	844us/step	_	loss:	1084081.0000
Epoch 17/50					
2930/2930 —————	3s	883us/step	_	loss:	1116684.5000
Epoch 18/50					
2930/2930 —————	2s	831us/step	_	loss:	1151131.7500
Epoch 19/50	_			_	
2930/2930 ————————————————————————————————————	2s	820us/step	_	loss:	1018/63.8125
Epoch 20/50 2930/2930 ————————————————————————————————————	2.	02000/6400		10001	1012102 2750
Epoch 21/50	25	629us/step	_	1055;	1012103.3/30
2930/2930 ————	36	800us/sten	_	1000	1057128 6250
Epoch 22/50	- 33	090u3/31ep		1033.	103/120:0230
2930/2930 ————	3s	854us/step	_	loss:	1176110.1250
Epoch 23/50		00 100, 010p		10001	
2930/2930 —————	2s	831us/step	_	loss:	1049594.2500
Epoch 24/50					
2930/2930 ————————	2s	818us/step	_	loss:	1078949.2500
Epoch 25/50					
2930/2930 ————————————————————————————————————	3s	880us/step	-	loss:	980283.5000
Epoch 26/50	_			_	
2930/2930 —	2s	823us/step	_	loss:	1042747.1875
Epoch 27/50	_	0.44 / 1		,	004635 3435
2930/2930 ————————————————————————————————————	25	841us/step	_	loss:	961625.3125
Epoch 28/50 2930/2930 ————————————————————————————————————	26	022115/5+00		1000	1027210 0125
Epoch 29/50	25	033us/step	_	1055.	103/210.0123
2930/2930 ————	25	831us/sten	_	lossi	985702 8125
Epoch 30/50		03143/310р			30370210123
2930/2930 ————	2s	826us/step	_	loss:	997575.7500
Epoch 31/50					
2930/2930 —————	2s	791us/step	_	loss:	1032446.8125
Epoch 32/50					
2930/2930 —————	2s	819us/step	_	loss:	993007.5625
Epoch 33/50	_			-	
2930/2930 ————————————————————————————————————	2s	816us/step	-	loss:	1038076.8125
Epoch 34/50	2-	044/		1	044100 0075
2930/2930 — Epoch 35/50	25	844us/step	_	loss:	944180.0875
2930/2930 ————————————————————————————————————	26	82/ws/sten	_	1000	1078001 0000
Epoch 36/50	23	024u3/3cep		1033.	107000410000
2930/2930 ————	25	827us/sten	_	loss:	1062290.6250
Epoch 37/50		, seep		10001	
2930/2930 ————	2s	821us/step	_	loss:	1071109.1250
Epoch 38/50					
2930/2930 ———————	3s	980us/step	_	loss:	957239.5625
Epoch 39/50					
2930/2930 —————	2s	835us/step	-	loss:	1007722.3125
Epoch 40/50					

```
2s 843us/step - loss: 1025437.4375
2930/2930 -
Epoch 41/50
2930/2930 -
                          2s 814us/step - loss: 976923.8750
Epoch 42/50
2930/2930 -
                            - 2s 837us/step - loss: 948396.0000
Epoch 43/50
2930/2930 -
                          — 2s 831us/step - loss: 958211.1250
Epoch 44/50
2930/2930 -
                          — 2s 815us/step - loss: 982310.0625
Epoch 45/50
2930/2930 -
                           — 2s 817us/step - loss: 991114.5625
Epoch 46/50
2930/2930 -
                            - 3s 899us/step - loss: 957883.7500
Epoch 47/50
2930/2930 -
                         3s 851us/step - loss: 990509.5625
Epoch 48/50
2930/2930 -
                          2s 824us/step - loss: 1047256.0000
Epoch 49/50
2930/2930 -
                        2s 819us/step - loss: 1013190.1250
Epoch 50/50
2930/2930 -
                       2s 835us/step - loss: 1029607.1250
                    1s 731us/step
1465/1465 -
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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```
2930/2930 -
                    4s 812us/step - loss: 10017423.0000
Epoch 2/50
2930/2930 -
                         2s 803us/step - loss: 6728330.5000
Epoch 3/50
2930/2930 -
                        2s 825us/step - loss: 1671076.6250
Epoch 4/50
2930/2930 -
                           — 2s 810us/step - loss: 4965389.0000
Epoch 5/50
2930/2930 -
                        2s 789us/step - loss: 8625129.0000
Epoch 6/50
2930/2930 -
                           - 2s 802us/step - loss: 1473337.8750
Epoch 7/50
2930/2930 -
                          2s 806us/step - loss: 6760194.5000
Epoch 8/50
                           - 2s 805us/step - loss: 3556802.7500
2930/2930 -
Epoch 9/50
2930/2930 -
                        2s 814us/step - loss: 3059439.7500
Epoch 10/50
```

2930/2930	2s	810us/step	_	loss:	2284458.7500
Epoch 11/50 2930/2930 ————————————————————————————————————	25	794us/sten	_	loss:	2891709.2500
Epoch 12/50		, o . a.o, o cop			
2930/2930 —————	2s	821us/step	_	loss:	2805819.0000
Epoch 13/50					
2930/2930 ——————	2s	806us/step	_	loss:	3822509.7500
Epoch 14/50					
2930/2930 ——————	2s	798us/step	_	loss:	1697994.5000
Epoch 15/50					
2930/2930 —————	2s	807us/step	_	loss:	3152264.2500
Epoch 16/50	_			_	
2930/2930 ————	2s	831us/step	_	loss:	3838044.5000
Epoch 17/50	•	000 / 1		,	4707064 0750
2930/2930 ————————————————————————————————————	25	800us/step	_	loss:	1/2/261.8/50
Epoch 18/50 2930/2930 ————————————————————————————————————	26	70046/6+00		10001	2567240 5000
Epoch 19/50	25	/9ous/step	_	10551	3307340.3000
2930/2930 ————	25	704us/sten	_	1055	1581778 0000
Epoch 20/50	23	75403/3CCP			130177010000
2930/2930 ————	2s	800us/step	_	loss:	2590362.7500
Epoch 21/50		0000.0, 010p			
2930/2930 —————	2s	798us/step	_	loss:	6751443.0000
Epoch 22/50					
2930/2930 ——————	2s	810us/step	_	loss:	7363475.0000
Epoch 23/50					
2930/2930 ————————————————————————————————————	2s	832us/step	_	loss:	3460983.2500
Epoch 24/50					
2930/2930 —————	2s	793us/step	_	loss:	2576334.2500
Epoch 25/50	_			_	
2930/2930 ————————————————————————————————————	2s	826us/step	_	loss:	2/10003.0000
Epoch 26/50	2-	700 / - +		1	1500404 0000
2930/2930 ————————————————————————————————————	25	/98us/step	_	toss:	1566484.0000
2930/2930 —	26	810us/sten	_	1000	1017170 2500
Epoch 28/50	23	010и3/31СР		(033.	404747512300
2930/2930 ————	25	804us/sten	_	loss:	2529243.5000
Epoch 29/50		00.00,510p			20202 101000
2930/2930 —————	2s	795us/step	_	loss:	3987408.2500
Epoch 30/50					
2930/2930 ——————	2s	803us/step	_	loss:	6408289.0000
Epoch 31/50					
2930/2930 —————	2s	791us/step	_	loss:	1746485.5000
Epoch 32/50					
2930/2930 —————	2s	794us/step	-	loss:	5470163.0000
Epoch 33/50	_	045		-	E000000
2930/2930 ————————————————————————————————————	2s	815us/step	-	loss:	5032880.0000
Epoch 34/50	2-	706us /s+s=		1000	2010020 7500
2930/2930 ————————————————————————————————————	2 S	/yous/step	_	LUSS:	7919079 1200
Epoch 35/50					

```
2s 799us/step - loss: 6958714.5000
2930/2930 -
Epoch 36/50
2930/2930 -
                           2s 811us/step - loss: 5983479.0000
Epoch 37/50
2930/2930 -
                             - 2s 811us/step - loss: 3159005.5000
Epoch 38/50
2930/2930 -
                            — 2s 785us/step - loss: 2441205.2500
Epoch 39/50
2930/2930 -
                            - 2s 788us/step - loss: 2281896.2500
Epoch 40/50
2930/2930 -
                            - 2s 802us/step - loss: 4242020.0000
Epoch 41/50
2930/2930 -
                             - 2s 799us/step - loss: 8040081.5000
Epoch 42/50
2930/2930 -
                          2s 797us/step - loss: 6777763.0000
Epoch 43/50
2930/2930 -
                            - 2s 797us/step - loss: 1810403.3750
Epoch 44/50
2930/2930 -
                          2s 780us/step - loss: 1544163.3750
Epoch 45/50
2930/2930 -
                        2s 791us/step - loss: 2134205.0000
Epoch 46/50
2930/2930 -
                           — 2s 811us/step - loss: 2222023.5000
Epoch 47/50
2930/2930 -
                         2s 780us/step - loss: 3094313.0000
Epoch 48/50
2930/2930 -
                            - 2s 790us/step - loss: 5597145.0000
Epoch 49/50
2930/2930 -
                         2s 801us/step - loss: 3573938.5000
Epoch 50/50
2930/2930 -
                            - 2s 823us/step - loss: 1279430.7500
                   1s 726us/step
1465/1465 -
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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```
      1465/1465
      2s 845us/step - loss: 7984174.0000

      Epoch 2/50
      1465/1465
      1s 773us/step - loss: 3012418.5000

      Epoch 3/50
      1s 766us/step - loss: 1998635.0000

      Epoch 4/50
      1s 772us/step - loss: 8140584.5000

      Epoch 5/50
```

1465/1465 —	1.	775us /stop		10001	21/2/62 5000
Epoch 6/50	12	//ous/step -	_	10551	3143403.3000
1465/1465 —	1c	762us/sten -	_	1055	3950250 0000
Epoch 7/50	13	70203/3CCP			333023010000
1465/1465 ————————————————————————————————————	1s	772us/step -	_	loss:	3312804.0000
Epoch 8/50					
1465/1465 ————————————————————————————————————	1s	780us/step -	_	loss:	7837578.0000
Epoch 9/50		•			
1465/1465 ————————————————————————————————————	1 s	776us/step -	-	loss:	2442368.7500
Epoch 10/50					
1465/1465 ————————————————————————————————————	1 s	785us/step -	-	loss:	3638286.5000
Epoch 11/50	_			-	
1465/1465	1s	/83us/step -	-	loss:	226/364./500
Epoch 12/50	1.	70Fus /stop		10001	2604615 0000
1465/1465 — Epoch 13/50	12	/obus/step -	_	10551	2004013.0000
1465/1465 —	1c	770us/sten -	_	1055	5642831 0000
Epoch 14/50	13	7734373 сер			304203110000
1465/1465 ————————————————————————————————————	1s	826us/step -	_	loss:	1512670.3750
Epoch 15/50					
1465/1465	1 s	828us/step -	_	loss:	2494149.5000
Epoch 16/50					
1465/1465 ————————————————————————————————————	1 s	806us/step -	-	loss:	1831078.8750
Epoch 17/50	_			_	
1465/1465	1s	775us/step -	-	loss:	2852613.7500
Epoch 18/50	1.	705 / 54.55		1	1000721 0000
1465/1465 — Epoch 19/50	15	/85us/step -	_	toss:	1990/31.0000
1465/1465 ————————————————————————————————————	16	786us/sten -	_	1000	3720173 2500
Epoch 20/50	13	70003/31CP			372017312300
1465/1465 ————————————————————————————————————	1s	788us/step -	_	loss:	1885198.5000
Epoch 21/50		,			
1465/1465	1s	792us/step -	_	loss:	5969460.5000
Epoch 22/50					
1465/1465 ————————————————————————————————————	1 s	804us/step -	-	loss:	3433078.5000
Epoch 23/50	_			-	
1465/1465	1s	829us/step -	-	loss:	2728526.2500
Epoch 24/50	1.	70/146/6+65		10001	4177660 7500
1465/1465 ————————————————————————————————————	15	/64us/step -	_	1055:	41//009./500
1465/1465 —	1ς	794us/sten -	_	1055.	3161827 5000
Epoch 26/50		75445/5ccp			310102713000
1465/1465 ————————————————————————————————————	1s	795us/step -	_	loss:	2409265.2500
Epoch 27/50					
1465/1465	1 s	786us/step -	-	loss:	2710369.7500
Epoch 28/50					
1465/1465 ————————————————————————————————————	1 s	782us/step -	-	loss:	2307859.5000
Epoch 29/50	_				
1465/1465	1s	/98us/step -	-	loss:	4/27960.0000
Epoch 30/50					

	- 1s 789us/step - loss: 8988769.0000
Epoch 31/50	
	- 1s 791us/step - loss: 2674650.7500
Epoch 32/50	1- 700/
	- 1s 788us/step - loss: 2089461.6250
Epoch 33/50	1c 70/us/stan lass: 220//05 0000
Epoch 34/50	- 1s 784us/step - loss: 3294485.0000
·	- 1s 788us/step - loss: 1731211.0000
Epoch 35/50	13 /00us/step - toss. 1/31211.0000
	- 1s 734us/step - loss: 2455257.0000
Epoch 36/50	23 /3 lu3/3 ccp
1465/1465	- 1s 780us/step - loss: 5598197.5000
Epoch 37/50	
	- 1s 787us/step - loss: 5648630.5000
Epoch 38/50	·
1465/1465 ————————————————————————————————————	- 1s 781us/step - loss: 2850173.0000
Epoch 39/50	
	- 1s 799us/step - loss: 2661091.7500
Epoch 40/50	
	- 1s 834us/step - loss: 3658258.0000
Epoch 41/50	
	- 1s 781us/step - loss: 5976313.5000
Epoch 42/50	7 704 / 1 3 3745036 5000
	- 1s 794us/step - loss: 3745036.5000
Epoch 43/50	- 1s 783us/step - loss: 6377951.5000
Epoch 44/50	- 15 /83us/step - toss: 63//931.3000
•	- 1s 788us/step - loss: 4006593.2500
Epoch 45/50	- 13 /00u3/3tep - t033. 4000393.2300
	- 1s 784us/step - loss: 2362640.7500
Epoch 46/50	
· ·	- 1s 775us/step - loss: 5995953.5000
Epoch 47/50	•
1465/1465 ————————————————————————————————————	- 1s 774us/step - loss: 1904626.3750
Epoch 48/50	
1465/1465 —————————	- 1s 796us/step - loss: 3095318.7500
Epoch 49/50	
	- 1s 817us/step - loss: 1920184.7500
Epoch 50/50	
1465/1465	- 1s 777us/step - loss: 7617019.0000
733/733 — 1	LS /41US/STEP
Epoch 1/50	

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super()mill_(activity_re				
1465/1465 ————————————————————————————————————	2s	793us/step -	loss:	6157791.0000
Epoch 2/50				
1465/1465 ————————————————————————————————————	1 s	781us/step -	loss:	1243022.0000
Epoch 3/50				
1465/1465 ————————————————————————————————————	1 s	792us/step -	loss:	1162879.8750
Epoch 4/50				
1465/1465 ————————————————————————————————————	1 s	776us/step -	loss:	1061116.2500
Epoch 5/50				
1465/1465 ————————————————————————————————————	1 s	784us/step –	loss:	1004804.8750
Epoch 6/50	_			
1465/1465 —	1s	841us/step -	loss:	998163.3125
Epoch 7/50	_	700 / 1	,	1005654 0750
1465/1465	ls	/89us/step -	loss:	1025654.3750
Epoch 8/50	1 -	702 / - +	1	1027624 1075
1465/1465 ————————————————————————————————————	IS	/82us/step -	LOSS:	103/624.18/5
Epoch 9/50 1465/1465	1.	706us /stop	10001	1000270 0000
Epoch 10/50	15	/80us/step -	1055;	10993/0.0000
1465/1465 ————————	1.	796us/sten -	1000	1032210 0625
Epoch 11/50	13	700us/step -	1055.	1032210:0023
1465/1465 ————————————————————————————————————	1 c	784us/sten -	1055	1042784 4375
Epoch 12/50	13	70-403/31СР	(033.	104270414373
1465/1465	1s	788us/step -	loss:	1118481.5000
Epoch 13/50		, ccus, cccp		
1465/1465 —	1s	791us/step -	loss:	1082042.3750
Fnoch 14/50				
1465/1465 ————	1 s	836us/step -	loss:	1153658.7500
Epoch 15/50		·		
1465/1465	1 s	794us/step -	loss:	1116181.5000
Epoch 16/50				
1465/1465 ————————————————————————————————————	1 s	796us/step -	loss:	1014505.5625
Epoch 17/50				
	1 s	790us/step -	loss:	1024733.0625
Epoch 18/50				
1465/1465	1 s	788us/step –	loss:	1004150.5625
Epoch 19/50	_	707 / :	-	4040400 00==
1465/1465 —	ls	/8/us/step -	loss:	1010432.93/5
Epoch 20/50	1 -	705 / - +	1	1007272 0125
1465/1465 ————————————————————————————————————	TS	/95us/step -	LOSS:	100/2/2.8125
Epoch 21/50	1 -	70Fue /e+e=	1000	1024770 0125
1465/1465 ————————————————————————————————————	TS	/85us/step -	loss:	1024//9.8125

Epoch 22/50 1465/1465 ————————————————————————————————————	1.	705us/sten -	1000	. 1063103 0000
Epoch 23/50	13	/93us/step =	. (033	. 1003193.0000
1465/1465 —————	1s	781us/step -	loss	: 1053609.7500
Epoch 24/50				
1465/1465	1 s	785us/step -	loss	946646.5625
Epoch 25/50				
1465/1465 ——————	1 s	781us/step -	· loss	: 1078915.5000
Epoch 26/50				
1465/1465	1 s	789us/step -	· loss	: 1138721.1250
Epoch 27/50		704 / 1		4040646 5605
1465/1465 ————————————————————————————————————	IS	/94us/step -	· LOSS	: 1010040.5625
Epoch 28/50 1465/1465 ————————————————————————————————————	1.	700us /stop	1000	. 10/2015 1250
Epoch 29/50	12	/oous/step -	. 1055	. 1042013.1230
1465/1465 —————	1s	823us/sten -	loss	1086461.1250
Epoch 30/50		023u3, 3 top		. 1000 101111250
1465/1465	1s	797us/step -	loss	: 1039654.2500
Epoch 31/50				
1465/1465 —————————	1 s	771us/step -	· loss	: 1032184.9375
Epoch 32/50				
1465/1465 ————————————————————————————————————	1 s	801us/step -	· loss	: 1007867.6250
Epoch 33/50	_	706 / .	-	4435000 0000
1465/1465 ————————————————————————————————————	ls	/86us/step -	· Loss	: 1135890.0000
Epoch 34/50 1465/1465 ————————————————————————————————————	1.	702us /stop	1000	. 060770 2750
Epoch 35/50	13	/92us/step =	. (033	. 909//013/30
1465/1465 ————	1s	783us/step -	loss	966481.1875
Epoch 36/50				
1465/1465 ———————	1 s	879us/step -	loss	: 1035451.0625
Epoch 37/50				
1465/1465 ——————	1 s	830us/step -	· loss	: 1056829.6250
Epoch 38/50	_		_	
1465/1465 ————————————————————————————————————	1 s	845us/step -	· loss	: 1138968.5000
Epoch 39/50 1465/1465 ————————————————————————————————————	1.	022us /stan	1000	. 1001166 7500
Epoch 40/50	13	023u3/3tep -	. (033	. 1001100.7500
1465/1465 ————————————————————————————————————	1s	808us/step -	· loss	: 1082689.8750
Epoch 41/50				
1465/1465	1 s	824us/step -	loss	: 1013234.0625
Epoch 42/50		-		
1465/1465 ——————	1 s	836us/step -	· loss	: 1103736.8750
Epoch 43/50				
1465/1465	1 s	788us/step -	· loss	: 1046165.2500
Epoch 44/50	1.	702112/2+22	1	. 1053100 0000
1465/1465 — Epoch 45/50	TZ	/osus/step -	. 1055	. 1023198.0000
1465/1465 —————	1 c	782115/sten -	. 1000	• 1102864 1250
Epoch 46/50	T 2	,0203/31CP -	1033	. II02004.IZJ0
1465/1465 ————	1s	785us/step -	loss	931919.0625
			1000	

```
Epoch 47/50

1465/1465 — 1s 787us/step - loss: 985603.2500

Epoch 48/50

1465/1465 — 1s 784us/step - loss: 997781.1875

Epoch 49/50

1465/1465 — 1s 788us/step - loss: 1065549.5000

Epoch 50/50

1465/1465 — 1s 776us/step - loss: 1014833.7500

733/733 — 1s 745us/step

Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                       2s 818us/step - loss: 9442030.0000
Epoch 2/50
                          1s 784us/step - loss: 2364093.5000
1465/1465 -
Epoch 3/50
1465/1465 -
                           1s 787us/step - loss: 2151188.2500
Epoch 4/50
1465/1465 -
                            - 1s 795us/step - loss: 5950524.5000
Epoch 5/50
1465/1465 -
                             - 1s 777us/step - loss: 3718038.0000
Epoch 6/50
1465/1465 -
                           1s 773us/step - loss: 4292882.5000
Epoch 7/50
                          1s 778us/step - loss: 1410339.6250
1465/1465 -
Epoch 8/50
1465/1465 -
                             - 1s 778us/step - loss: 2364614.2500
Epoch 9/50
1465/1465 -
                             - 1s 783us/step - loss: 4030599.7500
Epoch 10/50
                            - 1s 769us/step - loss: 2286830.7500
1465/1465 -
Epoch 11/50
1465/1465 -
                             - 1s 774us/step - loss: 5208794.0000
Epoch 12/50
1465/1465 -
                             - 1s 762us/step - loss: 1973869.1250
Epoch 13/50
                          1s 779us/step - loss: 5223526.5000
1465/1465 -
Epoch 14/50
1465/1465 -
                             - 1s 786us/step - loss: 2732254.0000
Epoch 15/50
1465/1465 -
                           1s 793us/step - loss: 2012656.6250
Epoch 16/50
```

- **1s** 772us/step - loss: 2925326.7500

1465/1465 -

- 1 47/50		
Epoch 17/50	1s 786us/step - loss: 1506530.0000	
Epoch 18/50	15 /00d3/step - toss. 1500550.0000	
	1s 787us/step - loss: 3616269.5000	
Epoch 19/50		
	1s 874us/step - loss: 1772946.3750	
Epoch 20/50	·	
1465/1465 ————————————————————————————————————	1s 791us/step - loss: 4428792.0000	
Epoch 21/50		
	1s 786us/step - loss: 1698291.8750	
Epoch 22/50		
	1s 775us/step - loss: 3071370.0000	
Epoch 23/50	1- 772/ 1 16142241 0000	
	1s 773us/step - loss: 16142241.0000)
Epoch 24/50	1s 772us/step - loss: 5114976.0000	
Epoch 25/50	13 //2d3/3tep - to33. 31143/0.0000	
	1s 777us/step - loss: 2976243.5000	
Epoch 26/50		
	1s 776us/step - loss: 3099554.5000	
Epoch 27/50	·	
1465/1465 ————————	1s 782us/step - loss: 3085114.2500	
Epoch 28/50		
	1s 826us/step - loss: 3290202.5000	
Epoch 29/50	/	
	1s 797us/step - loss: 4192872.5000	
Epoch 30/50	1s 787us/step - loss: 3373769.5000	
Epoch 31/50	15 /6/us/step - toss. 33/3/09.3000	
	1s 848us/step - loss: 2728080.5000	
Epoch 32/50	20 0 1000, 5 200	
	1s 838us/step - loss: 5516522.0000	
Epoch 33/50		
1465/1465 ————————	1s 814us/step - loss: 2633710.7500	
Epoch 34/50		
	1s 822us/step - loss: 4257417.5000	
Epoch 35/50		
	1s 843us/step - loss: 9774226.0000	
Epoch 36/50	1s 843us/step - loss: 6689888.5000	
Epoch 37/50	15 043us/step - toss. 0009000.3000	
· ·	1s 841us/step - loss: 1590251.3750	
Epoch 38/50	25 6 1143 / 5 (6)	
	1s 871us/step - loss: 3003100.0000	
Epoch 39/50		
1465/1465	1s 803us/step - loss: 4779419.5000	
Epoch 40/50		
	1s 813us/step - loss: 1888693.3750	
Epoch 41/50		
1465/1465	1s 788us/step - loss: 2619538.2500	

```
Epoch 42/50
1465/1465 -
                          ---- 1s 815us/step - loss: 2487489.7500
Epoch 43/50
1465/1465 -
                             - 1s 804us/step - loss: 2696806.7500
Epoch 44/50
                             - 1s 786us/step - loss: 2309414.7500
1465/1465 -
Epoch 45/50
1465/1465 -
                             - 1s 792us/step - loss: 1756459.8750
Epoch 46/50
1465/1465 -
                             - 1s 791us/step - loss: 2709828.2500
Epoch 47/50
1465/1465 -
                           —— 1s 772us/step – loss: 3801760.5000
Epoch 48/50
1465/1465 -
                            — 1s 776us/step - loss: 1424263.0000
Epoch 49/50
1465/1465 -
                             - 1s 775us/step - loss: 1279584.0000
Epoch 50/50
1465/1465 -
                          1s 769us/step - loss: 2836729.2500
733/733 —
                       1s 760us/step
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

```
3s 763us/step - loss: 9165035.0000
2930/2930 ———
Epoch 2/50
                         2s 748us/step - loss: 2033518.2500
2930/2930 -
Epoch 3/50
2930/2930 -
                           — 2s 757us/step - loss: 4328719.0000
Epoch 4/50
2930/2930 -
                          — 2s 756us/step - loss: 4403608.5000
Epoch 5/50
                          2s 789us/step - loss: 2357149.7500
2930/2930 -
Epoch 6/50
2930/2930 -
                            - 3s 978us/step - loss: 3456085.2500
Epoch 7/50
2930/2930 -
                           - 2s 779us/step - loss: 2225907.2500
Epoch 8/50
                         2s 762us/step - loss: 3102479.7500
2930/2930 -
Epoch 9/50
2930/2930 -
                            - 2s 778us/step - loss: 4663217.0000
Epoch 10/50
2930/2930 -
                          2s 770us/step - loss: 3676875.7500
Epoch 11/50
2930/2930 -
                            - 2s 773us/step - loss: 4220416.5000
```

E 12/50					
Epoch 12/50 2930/2930 ————————————————————————————————————	26	777us/ston		10001	1250200 1250
Epoch 13/50	25	///us/step	_	1055.	1230200:1230
2930/2930 ————	2s	783us/step	_	loss:	3217413.7500
Epoch 14/50					
2930/2930 —————	2s	779us/step	_	loss:	2609703.7500
Epoch 15/50					
2930/2930 —————	2s	782us/step	-	loss:	2782534.0000
Epoch 16/50	2-	700 / - +		1	4227000 5000
2930/2930 — Epoch 17/50	25	/90us/step	_	loss:	422/080.5000
2930/2930 ————	25	777us/sten	_	lossi	3049732_0000
Epoch 18/50		///d3/3ccp			304373210000
2930/2930 —————	2s	777us/step	_	loss:	3412598.7500
Epoch 19/50					
2930/2930 —————	2s	779us/step	-	loss:	1638700.6250
Epoch 20/50	_	700 / /		-	6076500 5000
2930/2930 ————————————————————————————————————	2s	/82us/step	_	loss:	68/6588.5000
Epoch 21/50 2930/2930 ————————————————————————————————————	26	772us/stan	_	1000	507/723 5000
Epoch 22/50	23	772u3/3tep		1033.	307472313000
2930/2930 ————	2s	769us/step	_	loss:	3487785.2500
Epoch 23/50					
2930/2930 —————	2s	775us/step	_	loss:	3834541.7500
Epoch 24/50	_			_	
2930/2930 ————————————————————————————————————	2s	837us/step	-	loss:	6039657.5000
Epoch 25/50 2930/2930 ————————————————————————————————————	26	771us /s+op		1000	22/10021 5000
Epoch 26/50	25	//1us/step	_	10551	2240021.3000
2930/2930 ————	2s	773us/step	_	loss:	5515920.5000
Epoch 27/50					
2930/2930 —————	2s	782us/step	_	loss:	5140093.0000
Epoch 28/50					
2930/2930 ————————————————————————————————————	2s	782us/step	_	loss:	4258107.5000
Epoch 29/50 2930/2930 ————————————————————————————————————	26	00106/6+00		10001	2212755 7500
Epoch 30/50	25	901u3/3tep	_	1055.	2213/33:/300
2930/2930 ————	2s	782us/step	_	loss:	2846167.7500
Epoch 31/50					
2930/2930 —————	2s	786us/step	_	loss:	6516982.0000
Epoch 32/50					
2930/2930 ————	2s	761us/step	-	loss:	4431191.5000
Epoch 33/50	2-	760 / a + a =		1	1214022 0000
2930/2930 — Epoch 34/50	2 S	/oous/step	_	LUSS:	1314022.0000
2930/2930 —————	25	785us/sten	_	loss:	2736743.0000
Epoch 35/50		. 2230, 3 сер			
2930/2930 ————	2s	784us/step	_	loss:	3009877.2500
Epoch 36/50					
2930/2930 —————	2s	811us/step	-	loss:	2466875.2500

```
Epoch 37/50
2930/2930 -
                        2s 782us/step - loss: 2611824.2500
Epoch 38/50
2930/2930 -
                          2s 770us/step - loss: 2060430.2500
Epoch 39/50
                          2s 778us/step - loss: 3352488.7500
2930/2930 -
Epoch 40/50
2930/2930 -
                           - 2s 756us/step - loss: 2830716.7500
Epoch 41/50
2930/2930 -
                           - 2s 791us/step - loss: 2292119.0000
Epoch 42/50
2930/2930 -
                         2s 775us/step - loss: 9094331.0000
Epoch 43/50
2930/2930 -
                          2s 773us/step - loss: 4331577.5000
Epoch 44/50
2930/2930 -
                          2s 779us/step - loss: 5715379.5000
Epoch 45/50
2930/2930 -
                         2s 833us/step - loss: 3787711.7500
Epoch 46/50
2930/2930 -
                           — 2s 788us/step - loss: 5381666.0000
Epoch 47/50
2930/2930 -
                         2s 782us/step - loss: 5307378.0000
Epoch 48/50
2930/2930 -
                         2s 776us/step - loss: 2589325.7500
Epoch 49/50
2930/2930 -
                       2s 775us/step - loss: 3988515.5000
Epoch 50/50
                  2s 762us/step - loss: 1247820.6250

1s 718us/step
2930/2930 —
1465/1465 -
Epoch 1/50
```

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```
2930/2930 -
                        ---- 3s 802us/step - loss: 4715669.0000
Epoch 2/50
2930/2930 -
                         2s 817us/step - loss: 1124262.1250
Epoch 3/50
                       2s 815us/step - loss: 1080430.6250
2930/2930 -
Epoch 4/50
2930/2930 -
                         2s 795us/step - loss: 1008374.8125
Epoch 5/50
2930/2930 -
                       2s 818us/step - loss: 1284610.6250
Epoch 6/50
2930/2930 -
                           — 2s 831us/step - loss: 1047629.0625
```

F 7 /FO		
Epoch 7/50	2s 797us/step - loss: 1074820.8	750
Epoch 8/50	25 /9/us/step - toss: 10/4820.8	750
	2s 798us/step - loss: 1028765.1	875
Epoch 9/50	23 / 30d3/ 30dp	075
	2s 820us/step - loss: 1044236.0	000
Epoch 10/50		
2930/2930 —————	2s 795us/step - loss: 1061261.6	250
Epoch 11/50		
	2s 819us/step - loss: 1122282.2	500
Epoch 12/50		
	2s 794us/step - loss: 1109579.5	000
Epoch 13/50	2- 004/atan lana 1045142.0	275
Epoch 14/50	2s 804us/step - loss: 1045142.9	3/5
	2s 798us/step - loss: 1019391.8	125
Epoch 15/50	23 / 9003/3 (CP	123
	2s 787us/step - loss: 1135262.7	500
Epoch 16/50	•	
2930/2930 —————	2s 786us/step - loss: 1104810.7	500
Epoch 17/50		
	2s 792us/step - loss: 1014507.1	875
Epoch 18/50	2 706 / 1 1 1024074 6	250
	2s 796us/step - loss: 1024971.6	250
Epoch 19/50	2s 781us/step - loss: 986828.75	aa
Epoch 20/50	23 70103/3 (CP	00
	2s 795us/step - loss: 1077498.2	500
Epoch 21/50	·	
	3s 878us/step - loss: 1009501.4	375
Epoch 22/50		
	3s 853us/step - loss: 1046329.8	750
Epoch 23/50	2s 844us/step - loss: 1013606.8	125
Epoch 24/50	23 04443/31Cp - 1033. 101300010	123
	2s 812us/step - loss: 1015494.1	250
Epoch 25/50		
2930/2930 —————	2s 791us/step - loss: 1059878.0	000
Epoch 26/50		
	2s 795us/step - loss: 1069777.3	750
Epoch 27/50	2- 700/-h 1 1047150 C	250
	2s 780us/step - loss: 1047150.6	250
Epoch 28/50	2s 777us/step - loss: 1104864.0	aaa
Epoch 29/50	23 ///03/3ccp (033. 1104004.0	555
	2s 795us/step - loss: 1058318.1	250
Epoch 30/50		
2930/2930 ———————	2s 793us/step - loss: 1027016.3	750
Epoch 31/50		
2930/2930 ———————	2s 783us/step - loss: 1021600.8	750

```
Epoch 32/50
2930/2930 -
                        —— 2s 786us/step - loss: 977623.3125
Epoch 33/50
2930/2930 -
                           — 2s 757us/step - loss: 997623.5625
Epoch 34/50
                            - 2s 725us/step - loss: 973477.0625
2930/2930 -
Epoch 35/50
2930/2930 -
                            - 2s 782us/step - loss: 975946.9375
Epoch 36/50
2930/2930 -
                             - 2s 787us/step - loss: 981395.0000
Epoch 37/50
2930/2930 -
                          2s 773us/step - loss: 964335.3750
Epoch 38/50
2930/2930 -
                           2s 778us/step - loss: 1040209.6875
Epoch 39/50
2930/2930 -
                            — 2s 800us/step - loss: 977443.5000
Epoch 40/50
2930/2930 -
                          --- 2s 792us/step - loss: 1031233.0000
Epoch 41/50
2930/2930 -
                            - 2s 800us/step - loss: 945186.1875
Epoch 42/50
2930/2930 -
                          2s 762us/step - loss: 1056419.1250
Epoch 43/50
2930/2930 -
                          2s 818us/step - loss: 973564.7500
Epoch 44/50
2930/2930 -
                         2s 783us/step - loss: 1010458.6250
Epoch 45/50
2930/2930 —
                         2s 841us/step - loss: 1028256.0000
Epoch 46/50
2930/2930 -
                             - 2s 818us/step - loss: 985782.6250
Epoch 47/50
2930/2930 -
                         2s 838us/step - loss: 1036101.2500
Epoch 48/50
2930/2930 -
                            — 2s 791us/step - loss: 1039115.8750
Epoch 49/50
2930/2930 -
                           2s 793us/step - loss: 980479.7500
Epoch 50/50
                     2s 785us/step - loss: 1087131.0000
1s 701us/step
2930/2930 -
1465/1465 -
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

2930/2930 — **3s** 792us/step - loss: 7337689.0000

Epoch 2/50					
2930/2930 ————	25	786us/sten	_	loss:	4846071.5000
Epoch 3/50		700d3/3tcp			404007113000
2930/2930 ————	2s	792us/step	_	loss:	3622313.2500
Epoch 4/50					
2930/2930 ——————	2s	767us/step	_	loss:	3357867.7500
Epoch 5/50					
2930/2930 ————	2s	820us/step	-	loss:	3701240.5000
Epoch 6/50	•	700 ()			2274707 5000
2930/2930 ————————————————————————————————————	25	/90us/step	_	loss:	23/4/0/.5000
Epoch 7/50 2930/2930 ————————————————————————————————————	25	700us/sten	_	1055.	6986784 5000
Epoch 8/50	23	75003/3CCP			030070413000
2930/2930 ————	2s	779us/step	_	loss:	4021051,2500
Epoch 9/50					
2930/2930 ——————	2s	784us/step	_	loss:	2746368.5000
Epoch 10/50					
2930/2930 —————	2s	777us/step	-	loss:	4548144.0000
Epoch 11/50	2 -	770 / - +		1	4014006 2500
2930/2930 — Epoch 12/50	25	//wus/step	_	loss:	4014890.2500
2930/2930 ————	25	775us/sten	_	1055.	2694516 2500
Epoch 13/50	23	773u373ccp			203431012300
2930/2930 ————	2s	789us/step	_	loss:	3657520.7500
Epoch 14/50		·			
2930/2930 —————	2s	780us/step	-	loss:	7502631.0000
Epoch 15/50				_	
2930/2930 —	2s	763us/step	-	loss:	5204652.0000
Epoch 16/50 2930/2930 ————————————————————————————————————	26	792us /s+on		1000	2426025 2500
Epoch 17/50	23	702u3/3tep		1055.	2430023.2300
2930/2930 ————	3s	897us/step	_	loss:	4505804.5000
Epoch 18/50		-			
2930/2930 ———————	2s	800us/step	_	loss:	4485119.0000
Epoch 19/50					
2930/2930 ————————————————————————————————————	2s	794us/step	_	loss:	4613183.0000
Epoch 20/50 2930/2930 ————————————————————————————————————	26	70/us/stop		1000	1655002 0000
Epoch 21/50	25	/94us/step	_	1055.	4033992.0000
2930/2930 ————	2s	785us/step	_	loss:	4723000.0000
Epoch 22/50		, 00 a.c, 0 cop			.,
2930/2930 ———————	2s	775us/step	_	loss:	7616532.0000
Epoch 23/50					
2930/2930 —————	2s	800us/step	-	loss:	5252040.5000
Epoch 24/50	3 -	052/-+-		1	2000016 2500
2930/2930 ————————————————————————————————————	35	გეკus/step	_	LOSS:	2999016.2500
Epoch 25/50 2930/2930 ————————————————————————————————————	20	756us/sten	_	10661	4630728 0000
Epoch 26/50	23	, 30u3/31cp	-	.033.	7030/2010000
2930/2930 ————	2s	840us/step	_	loss:	6475958.5000
· · · ·		, , , , , , , , , , , , , , , , , , ,			. ,

Epoch 27/50					
2930/2930 ————	25	810us/sten	_	1066.	3825067 2500
Epoch 28/50	23	01003/3100			302300712300
2930/2930 ————	2s	835us/step	_	loss:	3703790.5000
Epoch 29/50					
2930/2930 —————	3s	885us/step	_	loss:	2334853.5000
Epoch 30/50					
2930/2930 —————	3s	1ms/step -	lo	ss: 60	083082.0000
Epoch 31/50					
2930/2930 —————	2s	833us/step	_	loss:	5066181.5000
Epoch 32/50	_			_	
2930/2930 ————	2s	747us/step	_	loss:	3196689.5000
Epoch 33/50	•	702 / 1		,	2622504 0000
2930/2930 ————————————————————————————————————	25	/82us/step	_	loss:	2632591.0000
Epoch 34/50 2930/2930 ————————————————————————————————————	26	705us /stop		10001	//10100 E000
Epoch 35/50	25	765us/step	_	10551	4410100.3000
2930/2930 ————	25	783us/sten	_	1066.	2869368 5000
Epoch 36/50	23	70303/3100			200330013000
2930/2930 ————	2s	777us/step	_	loss:	6026307,0000
Epoch 37/50		,			
2930/2930 —————	2s	790us/step	_	loss:	3328972.7500
Epoch 38/50					
2930/2930 ——————	2s	794us/step	_	loss:	2090396.2500
Epoch 39/50					
2930/2930 —————	2s	793us/step	_	loss:	2917991.5000
Epoch 40/50	_			-	
2930/2930 ————————————————————————————————————	25	83/us/step	_	loss:	3244510.0000
Epoch 41/50 2930/2930 ————————————————————————————————————	26	70006/6400		10001	1755204 2500
Epoch 42/50	25	700us/step	_	1055.	1733204.2300
2930/2930 ————	25	801us/sten	_	loss:	2984454.0000
Epoch 43/50		00143, 5 сер			230113110000
2930/2930 —————	2s	787us/step	_	loss:	2703758.5000
Epoch 44/50					
2930/2930 —————	2s	808us/step	_	loss:	1110743.3750
Epoch 45/50					
2930/2930 —————	2s	843us/step	-	loss:	1665845.8750
Epoch 46/50	_			_	
2930/2930 —————	2s	812us/step	_	loss:	2056055.6250
Epoch 47/50	2-	007/		1	2002000 2500
2930/2930 ————————————————————————————————————	25	80/us/step	_	LOSS:	3002900.2500
Epoch 48/50 2930/2930 ————————————————————————————————————	36	903us/stan	_	10001	3710162 2500
Epoch 49/50	JS	anana/arch	_	.033	2/12107 2000
2930/2930 ————	3s	858us/sten	_	loss:	5695873.0000
Epoch 50/50		13000, 010p			2 3 2 2 2 . 3 . 3 3 3 3
2930/2930 ————	2s	845us/step	_	loss:	3986396.7500
1465/1465 —————	1 s	808us/step			
Epoch 1/100					

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X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super ()three(activity_re				
1465/1465 ———————	3s	1ms/step - loss	: 12	2274619.0000
Epoch 2/100				
1465/1465 —————	1 s	819us/step - los	ss:	12033888.0000
Epoch 3/100				
1465/1465 —————	1 s	755us/step – lo	ss:	11114700.0000
Epoch 4/100				
1465/1465 ————	1 s	747us/step – los	ss:	9438790.0000
Epoch 5/100				
1465/1465 —————	1 s	749us/step – lo	ss:	11569729.0000
Epoch 6/100	_			
1465/1465	1 s	//8us/step - lo	ss:	889/8/9.0000
Epoch 7/100	_			0500074 0000
1465/1465	ls	///us/step - lo	ss:	9588374.0000
Epoch 8/100	1 -	777 /		7602005 0000
1465/1465 ————————————————————————————————————	IS	///us/step - los	ss:	7602985.0000
Epoch 9/100	1 -	016/		7070240 0000
1465/1465 ————————————————————————————————————	TS	816US/STEP - LOS	ss:	7979218.0000
Epoch 10/100 1465/1465	1.	020		0410506 0000
	15	829us/step - to:	55:	8419300.0000
Epoch 11/100 1465/1465 ————————————————————————————————————	1.	025/a+an la		6244706 0000
	15	825us/step - to:	55:	0344700.0000
Epoch 12/100 1465/1465	1.	744us/stop lo		7727006 5000
Epoch 13/100	12	744us/step – to:	55.	7737900.3000
1465/1465 ————	16	767us/sten - los		6633177 5000
Epoch 14/100	13	70703/31ep - to.	33.	003317713000
1465/1465	1 c	781us/sten = lo	cc.	6772744 0000
Epoch 15/100	13	70103/31CP to.		077274410000
1465/1465 —	15	744us/sten - lo	55!	3422456.7500
Epoch 16/100		, 1143, 5 ccp co.		312213017300
1465/1465 —————	1s	814us/step - los	ss:	5973161.0000
Epoch 17/100		о по		
1465/1465 —	1 s	801us/step - los	ss:	2718081.2500
Epoch 18/100				
1465/1465 ——————	1 s	767us/step - los	ss:	3899124.7500
Epoch 19/100		, ,		
1465/1465 ——————	1 s	777us/step - los	ss:	2817571.7500
Epoch 20/100		•		
1465/1465 —————	1 s	836us/step - los	ss:	3868645.0000
Epoch 21/100		•		
1465/1465	1 s	860us/step - los	ss:	4131220.0000

Epoch 22/100					
1465/1465 ————	1 c	707us/sten	_	1000	2826565 2500
Epoch 23/100	13	737d3/3ccp			202030312300
1465/1465	1s	817us/step	_	loss:	2770937.0000
Epoch 24/100		одина, отор			
1465/1465 ——————	1s	808us/step	_	loss:	3913794.7500
Epoch 25/100		•			
1465/1465	1 s	771us/step	_	loss:	2826469.2500
Epoch 26/100					
1465/1465 —————	1 s	791us/step	-	loss:	5180385.0000
Epoch 27/100					
1465/1465 —————	1 s	758us/step	-	loss:	2991892.2500
Epoch 28/100	_			-	
1465/1465 ————————————————————————————————————	1s	/90us/step	_	loss:	3325918.0000
Epoch 29/100 1465/1465 ————————————————————————————————————	1.	701us/stop		10001	2446060 0000
Epoch 30/100	15	/91us/step	_	10551	2440900.0000
1465/1465 ————	1 c	763us/sten	_	1000	3862115 2500
Epoch 31/100	13	703u3/3ccp			300211312300
1465/1465	1s	766us/step	_	loss:	6279204,0000
Epoch 32/100		, , , , ,			
1465/1465	1 s	726us/step	_	loss:	5241521.0000
Epoch 33/100					
1465/1465	1 s	700us/step	_	loss:	4304682.0000
Epoch 34/100					
1465/1465 ————	1 s	745us/step	-	loss:	3981652.7500
Epoch 35/100	_			_	
1465/1465	1s	/28us/step	_	loss:	5446281.5000
Epoch 36/100 1465/1465 ————————————————————————————————————	1.	701/c+on		10001	4106202 E000
Epoch 37/100	12	/olus/step	_	1055	4190303.3000
1465/1465 ————	1 c	774us/sten	_	1055.	3230233 5000
Epoch 38/100		774d373ccp			323023313000
1465/1465	1s	742us/step	_	loss:	11322196.0000
Epoch 39/100		•			
1465/1465 ——————	1 s	741us/step	_	loss:	6397478.5000
Epoch 40/100					
1465/1465 —————	1 s	724us/step	-	loss:	2206943.0000
Epoch 41/100				_	
1465/1465	1s	710us/step	-	loss:	5310647.5000
Epoch 42/100	1.	774/-+		1	2522741 2500
1465/1465 ————————————————————————————————————	15	//4us/step	_	LOSS:	3533741.2500
Epoch 43/100 1465/1465 ————————————————————————————————————	16	71500/0+00	_	lossi	2053255 0000
Epoch 44/100	Τ2	, 1202/21ch	_	1035.	∠ 3JJ∠JJ∎0000
1465/1465 —————	15	705us/sten	_	loss:	5726724.5000
Epoch 45/100					1120,2110000
1465/1465	1s	707us/step	_	loss:	3840155.5000
Epoch 46/100					
1465/1465	1 s	701us/step	_	loss:	3537918.0000

Epoch 47/100	- 1s 705us/step - loss: 1917275.8750
Epoch 48/100	- 13 /03u3/3tep - t033. 191/2/3:0/30
	- 1s 712us/step - loss: 5461323.5000
Epoch 49/100	
1465/1465	- 1s 707us/step - loss: 2073141.8750
Epoch 50/100	
	- 1s 706us/step - loss: 3405201.2500
Epoch 51/100	
	- 1s 709us/step - loss: 3721282.5000
Epoch 52/100	4250250 5000
	- 1s 709us/step - loss: 4250258.5000
Epoch 53/100	1. 700us/ston loss, 2/100E0 7E00
Epoch 54/100	- 1s 709us/step - loss: 3419059.7500
1465/1465	- 1s 705us/step - loss: 8759523.0000
Epoch 55/100	= 13 /0303/31Cp 10331 0/3332310000
	- 1s 708us/step - loss: 2230481.0000
Epoch 56/100	
1465/1465 ————————————————————————————————————	- 1s 671us/step - loss: 2716653.7500
Epoch 57/100	
1465/1465 —————————	- 1s 707us/step - loss: 5213279.0000
Epoch 58/100	
	- 1s 701us/step - loss: 4518248.0000
Epoch 59/100	
	- 1s 707us/step - loss: 3320806.0000
Epoch 60/100	1. 705/ston loss. 4633033 5000
Epoch 61/100	- 1s 705us/step - loss: 4632833.5000
	- 1s 704us/step - loss: 2071142.8750
Epoch 62/100	— 13 /0403/31CP 1033: 20/1142:0/30
	- 1s 704us/step - loss: 2578580.0000
Epoch 63/100	, , , , , , , , , , , , , , , , , , ,
1465/1465	- 1s 707us/step - loss: 2694383.0000
Epoch 64/100	
	- 1s 713us/step - loss: 4581557.5000
Epoch 65/100	
	- 1s 713us/step - loss: 1378212.6250
Epoch 66/100	1- 702/ 1 2022/02 2500
	- 1s 703us/step - loss: 2032482.2500
Epoch 67/100	- 1s 705us/step - loss: 1424782.6250
Epoch 68/100	- 15 /03u3/3tep - t033: 1424/02:0230
•	- 1s 704us/step - loss: 1247872.1250
Epoch 69/100	1111111 1111 1111 1111 1111 1111 1111 1111
	- 1s 704us/step - loss: 5647828.5000
Epoch 70/100	
	- 1s 707us/step - loss: 2172459.0000
Epoch 71/100	
1465/1465 ————————	- 1s 710us/step - loss: 1896432.1250

F 72/400	
Epoch 72/100	1s 712us/step - loss: 2333598.0000
Epoch 73/100	15 /12us/step - toss. 2555596.0000
	1s 708us/step - loss: 2235005.2500
Epoch 74/100	
1465/1465 ——————	1s 705us/step - loss: 4753983.5000
Epoch 75/100	
	1s 638us/step - loss: 5517461.5000
Epoch 76/100	7 740 / 1 2000422 4250
	1s 710us/step - loss: 2068122.1250
Epoch 77/100	1s 704us/step - loss: 8730417.0000
Epoch 78/100	13 /0403/3tcp
	1s 721us/step - loss: 2234615.2500
Epoch 79/100	•
1465/1465 ——————	1s 755us/step - loss: 2198044.5000
Epoch 80/100	
	1s 725us/step - loss: 2664184.5000
Epoch 81/100	1s 725us/step - loss: 2135350.0000
Epoch 82/100	15 /2505/Step - toss. 2155550.0000
	1s 722us/step - loss: 2150126.7500
Epoch 83/100	
1465/1465 ———————	1s 881us/step - loss: 3887956.0000
Epoch 84/100	
	1s 711us/step - loss: 1884151.2500
Epoch 85/100	1. 720/ 1 2705750 7500
Epoch 86/100	1s 738us/step - loss: 2705759.7500
	1s 736us/step - loss: 3127094.2500
Epoch 87/100	23 /3003/300
	1s 746us/step - loss: 2642615.7500
Epoch 88/100	
	1s 773us/step - loss: 3483273.2500
Epoch 89/100	1- 727/
Epoch 90/100	1s 727us/step - loss: 3740537.5000
	1s 733us/step - loss: 2297976.2500
Epoch 91/100	23 /3343/300
	1s 715us/step - loss: 2046415.1250
Epoch 92/100	
	1s 771us/step - loss: 5864555.0000
Epoch 93/100	
	1s 727us/step - loss: 1860817.8750
Epoch 94/100	1s 690us/step - loss: 2461115.5000
Epoch 95/100	13 03003/31CP - 1033. 2401113.3000
	1s 701us/step - loss: 1373219.7500
Epoch 96/100	
1465/1465 ——————	1s 693us/step - loss: 6050567.5000

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                          —— 2s 708us/step - loss: 9422787.0000
Epoch 2/100
1465/1465 -
                             — 1s 690us/step - loss: 9319023.0000
Epoch 3/100
1465/1465 -
                             - 1s 693us/step - loss: 8939532.0000
Epoch 4/100
1465/1465 -
                              - 1s 684us/step - loss: 8583832.0000
Epoch 5/100
1465/1465 -
                              - 1s 696us/step - loss: 8144647.5000
Epoch 6/100
1465/1465 -
                              - 1s 690us/step - loss: 7599492.0000
Epoch 7/100
                              - 1s 699us/step - loss: 7131357.0000
1465/1465 -
Epoch 8/100
1465/1465 -
                              - 1s 697us/step - loss: 6761496.0000
Epoch 9/100
1465/1465 -
                              - 1s 692us/step - loss: 6348718.5000
Epoch 10/100
                              - 1s 695us/step - loss: 6117714.5000
1465/1465 -
Epoch 11/100
1465/1465 -
                              - 1s 695us/step - loss: 5922555.5000
Epoch 12/100
1465/1465 -
                              - 1s 696us/step - loss: 5697568.0000
Epoch 13/100
1465/1465 -
                              - 1s 693us/step - loss: 5481348.5000
Epoch 14/100
1465/1465 -
                              - 1s 700us/step - loss: 5263566.0000
Epoch 15/100
1465/1465 -
                              - 1s 695us/step - loss: 5046402.0000
Epoch 16/100
```

- **1s** 692us/step - loss: 4737172.0000

1465/1465 -

Epoch 17/100	
	1s 695us/step - loss: 4623877.0000
Epoch 18/100	23 03343/3 CCp
	1s 693us/step - loss: 4046232.5000
Epoch 19/100	
1465/1465 ——————	1s 661us/step - loss: 3740191.5000
Epoch 20/100	
	1s 690us/step - loss: 3366138.0000
Epoch 21/100	1- 002/ 1 2000074 2500
Epoch 22/100	1s 693us/step - loss: 2860874.2500
	1s 696us/step - loss: 2408562.7500
Epoch 23/100	23 03003, 3000
	1s 690us/step - loss: 2049014.6250
Epoch 24/100	
	1s 696us/step - loss: 1764618.2500
Epoch 25/100	
	1s 695us/step - loss: 1536663.1250
Epoch 26/100	1s 695us/step - loss: 1319299.3750
Epoch 27/100	13 095u3/3tep - t033. 1519299:5750
1465/1465	1s 687us/step - loss: 1139520.8750
Epoch 28/100	•
1465/1465 ——————	1s 695us/step - loss: 1202404.2500
Epoch 29/100	
	1s 648us/step - loss: 1078332.6250
Epoch 30/100	1s 688us/step - loss: 1141209.7500
Epoch 31/100	15 088us/step - toss: 1141209./500
	1s 699us/step - loss: 1080638.0000
Epoch 32/100	
1465/1465	1s 691us/step - loss: 1059667.2500
Epoch 33/100	
	1s 687us/step - loss: 1115996.7500
Epoch 34/100	1s 692us/step - loss: 1066527.1250
Epoch 35/100	15 092us/step - toss: 1000527.1250
	1s 697us/step - loss: 1046973.7500
Epoch 36/100	
1465/1465	1s 695us/step - loss: 1093133.5000
Epoch 37/100	
	1s 692us/step - loss: 1034506.5625
Epoch 38/100	1- 004/
	1s 694us/step - loss: 1035729.0000
Epoch 39/100	1s 689us/step - loss: 1097457.1250
Epoch 40/100	22 333437 3 cop
	1s 700us/step - loss: 1033631.9375
Epoch 41/100	
1465/1465 ———————	1s 758us/step - loss: 1166719.5000

Frank 43/100					
Epoch 42/100 1465/1465 ————————————————————————————————————	1.	600us/sten		1000	10/12030 7500
Epoch 43/100	13	090us/step -		1055.	1042030.7300
1465/1465 —————	1s	683us/step -	_	loss:	1120001.2500
Epoch 44/100		-			
1465/1465	1 s	680us/step -	-	loss:	1075896.1250
Epoch 45/100					
1465/1465 ———————	1 s	692us/step -	-	loss:	1074427.8750
Epoch 46/100		607 / 1		,	1005001 6050
1465/1465 ————————————————————————————————————	IS	69/us/step -	_	loss:	1095801.6250
Epoch 47/100 1465/1465 ————————————————————————————————————	1 c	600us/sten -	_	1066.	1055801 7500
Epoch 48/100	13	090и3/31СР			103300117300
1465/1465 ————————————————————————————————————	1s	691us/step -	_	loss:	1140826.6250
Epoch 49/100		-			
1465/1465	1 s	643us/step -	-	loss:	1090634.5000
Epoch 50/100					
1465/1465 —	1 s	694us/step -	-	loss:	1063876.8750
Epoch 51/100 1465/1465 ————————————————————————————————————	1.	707 / - +		1	1042001 6075
Epoch 52/100	15	/0/us/step -	-	loss:	1043881.08/5
1465/1465 ————————————————————————————————————	1 c	604us/sten -	_	1066.	1068805 0000
Epoch 53/100		05-143/ 3 сер			100000310000
1465/1465 —————	1 s	689us/step -	_	loss:	1016113.1250
Epoch 54/100					
1465/1465 ————————————————————————————————————	1 s	697us/step -	-	loss:	1044099.1250
Epoch 55/100	_			_	
1465/1465	1 s	691us/step -	-	loss:	1080428.2500
Epoch 56/100 1465/1465 ————————————————————————————————————	1.0	602uc/ston		1000	11/711/ 7500
Epoch 57/100	12	003us/step -	_	1055.	114/114./500
1465/1465 —————	1s	693us/step -	_	loss:	1064911.7500
Epoch 58/100		000 a.o., 0 10p			
1465/1465	1 s	697us/step -	-	loss:	1066468.6250
Epoch 59/100					
1465/1465 ————————————————————————————————————	1 s	700us/step -	-	loss:	1074184.7500
Epoch 60/100	1.	701/		1	1050041 0000
1465/1465 — Epoch 61/100	15	/wius/step -	_	LOSS:	1050941.0000
1465/1465 ————————————————————————————————————	1 c	701us/sten -	_	1066.	1157055 3750
Epoch 62/100	13	70103/31CP			113703313730
1465/1465	1 s	693us/step -	_	loss:	1018633.1875
Epoch 63/100		·			
1465/1465 ———————	1 s	702us/step -	-	loss:	1037452.5000
Epoch 64/100				_	
1465/1465	1 s	695us/step -	-	loss:	1043947.0000
Epoch 65/100	1.	705.00 /0+		1000	1050677 1350
1465/1465 — Epoch 66/100	TS	/vous/step -	-	LOSS:	10290//.1250
1465/1465 —————	1s	710us/sten -	_	1055'	1025413 6875
1703/ 1703 ·	13	, 1003/31CP -		.033.	1023413100/3

- L 67/400	
Epoch 67/100	1s 695us/step - loss: 1046540.0000
Epoch 68/100	15 093us/step - toss: 1040340.0000
	1s 698us/step - loss: 1113912.7500
Epoch 69/100	, , , , , , , , , , , , , , , , , , ,
1465/1465 ——————	1s 705us/step - loss: 1138425.3750
Epoch 70/100	
	1s 728us/step - loss: 1070175.2500
Epoch 71/100	4 674 / 1 4420022 2750
	1s 671us/step - loss: 1128923.3750
Epoch 72/100	1s 624us/step - loss: 1084031.7500
Epoch 73/100	13 02403/3CCP
	1s 683us/step - loss: 1047260.0625
Epoch 74/100	•
1465/1465 ——————	1s 676us/step - loss: 1039853.5000
Epoch 75/100	
	1s 664us/step - loss: 1108992.7500
Epoch 76/100	1s 647us/step - loss: 1065098.5000
Epoch 77/100	15 04/us/step - toss. 1003090.3000
	1s 676us/step - loss: 1032959.3125
Epoch 78/100	
1465/1465 ——————	1s 624us/step - loss: 1061256.2500
Epoch 79/100	
	1s 673us/step - loss: 992461.7500
Epoch 80/100	1- ((2)-/
Epoch 81/100	1s 663us/step - loss: 1022835.3750
	1s 679us/step - loss: 1047739.6875
Epoch 82/100	23 0,343,3100,3
	1s 667us/step - loss: 1008899.8750
Epoch 83/100	
	1s 684us/step - loss: 1029144.3750
Epoch 84/100	1- (00/
Epoch 85/100	1s 698us/step - loss: 1064796.2500
	1s 686us/step - loss: 1050496.3750
Epoch 86/100	25 00003, 5 ccp
	1s 679us/step - loss: 1107765.8750
Epoch 87/100	
	1s 680us/step - loss: 1033975.0000
Epoch 88/100	
	1s 679us/step - loss: 1027448.7500
Epoch 89/100	1s 672us/step - loss: 1078270.3750
Epoch 90/100	23 0/2u3/3tcp - t033. 10/02/0.3/30
	1s 659us/step - loss: 1046878.6250
Epoch 91/100	
1465/1465 ——————	1s 681us/step - loss: 1136344.0000

```
Epoch 92/100
1465/1465 -
                            — 1s 657us/step - loss: 1077111.7500
Epoch 93/100
1465/1465 -
                              - 1s 665us/step - loss: 1067698.2500
Epoch 94/100
                              - 1s 672us/step - loss: 1076270.5000
1465/1465 -
Epoch 95/100
1465/1465 -
                              - 1s 691us/step - loss: 1041585.4375
Epoch 96/100
1465/1465 -
                              - 1s 687us/step - loss: 1071160.1250
Epoch 97/100
1465/1465 -
                              - 1s 659us/step - loss: 1072569.0000
Epoch 98/100
1465/1465 -
                              - 1s 677us/step - loss: 1059779.8750
Epoch 99/100
1465/1465 -
                              - 1s 681us/step - loss: 1076633.1250
Epoch 100/100
1465/1465 -
                             - 1s 682us/step - loss: 1035973.5000
733/733 -
                          — 1s 689us/step
Epoch 1/100
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2s 638us/step - loss: 11227077.0000
1465/1465 —
Epoch 2/100
                             - 1s 647us/step - loss: 11222987.0000
1465/1465 -
Epoch 3/100
1465/1465 -
                              - 1s 627us/step - loss: 14109442.0000
Epoch 4/100
                              - 1s 656us/step - loss: 10880574.0000
1465/1465 -
Epoch 5/100
                              - 1s 643us/step - loss: 11378397.0000
1465/1465 -
Epoch 6/100
1465/1465 -
                              - 1s 665us/step - loss: 9145911.0000
Epoch 7/100
1465/1465 -
                              - 1s 636us/step - loss: 7824370.0000
Epoch 8/100
1465/1465 -
                              - 1s 662us/step - loss: 14455218.0000
Epoch 9/100
1465/1465 -
                              - 1s 644us/step - loss: 8831781.0000
Epoch 10/100
                              - 1s 621us/step - loss: 8070247.0000
1465/1465 •
Epoch 11/100
1465/1465 -
                              - 1s 656us/step - loss: 6392666.5000
```

Epoch 12/100	
	- 1s 667us/step - loss: 10093037.0000
Epoch 13/100	23 00743/3 tep
	- 1s 673us/step - loss: 8177496.5000
Epoch 14/100	
1465/1465 —————	- 1s 632us/step - loss: 8561039.0000
Epoch 15/100	·
1465/1465 ————————————————————————————————————	- 1s 630us/step - loss: 6031419.5000
Epoch 16/100	
	- 1s 662us/step - loss: 11857156.0000
Epoch 17/100	
	- 1s 672us/step - loss: 6244367.0000
Epoch 18/100	1 644 / 1 1 14525276 0000
	- 1s 644us/step - loss: 11525276.0000
Epoch 19/100	- 1s 635us/step - loss: 3821303.7500
Epoch 20/100	- 15 03305/Step - t055: 3021303.7300
	- 1s 648us/step - loss: 9563736.0000
Epoch 21/100	— 13 04003/3ccp
1465/1465	- 1s 650us/step - loss: 3465006.0000
Epoch 22/100	
	- 1s 671us/step - loss: 4614322.5000
Epoch 23/100	
1465/1465 ————————	- 1s 649us/step - loss: 4413298.0000
Epoch 24/100	
	- 1s 661us/step - loss: 2852823.2500
Epoch 25/100	
	- 1s 674us/step - loss: 1740634.3750
Epoch 26/100	1c 640us/ston loss: 5174166 0000
Epoch 27/100	— 1s 640us/step — loss: 5174166.0000
	- 1s 660us/step - loss: 9500324.0000
Epoch 28/100	— 13 00003/3ccp
	- 1s 634us/step - loss: 3942093.0000
Epoch 29/100	
1465/1465	- 1s 629us/step - loss: 5641268.5000
Epoch 30/100	
	- 1s 614us/step - loss: 5592529.5000
Epoch 31/100	
	- 1s 620us/step - loss: 2726269.5000
Epoch 32/100	4.630 () 4.674407 5000
	- 1s 629us/step - loss: 4674487.5000
Epoch 33/100	- 1s 626us/step - loss: 5194443.0000
Epoch 34/100	- 15 02005/51Ep - 1055: 3194443.0000
	- 1s 641us/step - loss: 5767658.0000
Epoch 35/100	
	- 1s 629us/step - loss: 8259140.0000
Epoch 36/100	
	- 1s 633us/step - loss: 1775938.7500

Enach 27/100					
Epoch 37/100 1465/1465 ————————————————————————————————————	1 c	686us/sten	_	1000	3608218 7500
Epoch 38/100	13	000u3/31ep		1033.	309021017300
1465/1465 ————————————————————————————————————	1s	663us/step	_	loss:	3357585.7500
Epoch 39/100					
1465/1465 —————	1s	648us/step	_	loss:	6920110.0000
Epoch 40/100		•			
1465/1465	1 s	619us/step	-	loss:	7778907.5000
Epoch 41/100					
1465/1465 ——————	1 s	643us/step	-	loss:	5017750.0000
Epoch 42/100				_	
1465/1465 —	1s	660us/step	-	loss:	4904081.5000
Epoch 43/100		647		1	4000700 0000
1465/1465 ————————————————————————————————————	TS	64/us/step	_	loss:	4899789.0000
Epoch 44/100 1465/1465 ————————————————————————————————————	1 c	621us/sten		1000	1011610 0000
Epoch 45/100	13	021u3/31ep		1033.	494404910000
1465/1465 —————	1s	619us/step	_	loss:	2455992.5000
Epoch 46/100		01343, 310p			2.0000210000
1465/1465 —————	1s	670us/step	_	loss:	7881675.0000
Epoch 47/100		·			
1465/1465 ——————	1 s	644us/step	-	loss:	3433396.0000
Epoch 48/100					
1465/1465 ———————	1 s	616us/step	-	loss:	3375424.0000
Epoch 49/100	_			_	
1465/1465 ————————————————————————————————————	15	6//us/step	-	loss:	44/1856.0000
Epoch 50/100 1465/1465 ————————————————————————————————————	1 c	62/us/sten	_	1000	0703600 0000
Epoch 51/100	12	024u3/3tep		1055.	979309910000
1465/1465 ————————————————————————————————————	1s	624us/step	_	loss:	2499154.0000
Epoch 52/100		о по			
1465/1465	1s	607us/step	_	loss:	1390996.1250
Epoch 53/100					
1465/1465 —————————	1 s	623us/step	-	loss:	3541225.2500
Epoch 54/100	_			_	
1465/1465	1s	632us/step	-	loss:	3589201.5000
Epoch 55/100 1465/1465 ————————————————————————————————————	1.0	60045/5+00		10001	10206212 0000
Epoch 56/100	12	owwus/step	_	1055:	10300212.0000
1465/1465 ——————	1 c	605us/sten	_	1055	6341940 5000
Epoch 57/100	13	00343/3100			054154015000
1465/1465 ————————————————————————————————————	1s	658us/step	_	loss:	3002623.7500
Epoch 58/100					
1465/1465 ———————	1 s	657us/step	_	loss:	4821292.5000
Epoch 59/100					
1465/1465 —————————	1 s	624us/step	-	loss:	1885701.6250
Epoch 60/100	_	600 /		-	4555000 0000
1465/1465 ————————————————————————————————————	1 s	608us/step	-	loss:	4555822.0000
Epoch 61/100	1 -	621ug/a±a=		1000	4E11710 E000
1465/1465 ——————	TS	ozius/step	_	coss:	4511/19.5000

- 1 00 /400	
Epoch 62/100	1s 622us/step - loss: 3412599.2500
Epoch 63/100	13 022u3/3tep - t033. 3412393.2300
	1s 648us/step - loss: 7695862.5000
Epoch 64/100	•
1465/1465	1s 605us/step - loss: 4182829.0000
Epoch 65/100	·
1465/1465 ———————	1s 624us/step - loss: 3345027.2500
Epoch 66/100	
	1s 670us/step - loss: 3682628.0000
Epoch 67/100	
	1s 628us/step - loss: 5561115.5000
Epoch 68/100	3 644 () 3 2675255 5000
	1s 644us/step - loss: 2675355.5000
Epoch 69/100	1c 620us/ston loss, 25/2761 7500
Epoch 70/100	1s 629us/step - loss: 2542761.7500
	1s 654us/step - loss: 1599149.2500
Epoch 71/100	23 034u3/3ccp (033: 133314312300
1465/1465	1s 622us/step - loss: 5573308.5000
Epoch 72/100	
1465/1465 ——————	1s 616us/step - loss: 2811579.0000
Epoch 73/100	
	1s 619us/step - loss: 3222979.2500
Epoch 74/100	
	1s 647us/step - loss: 2500680.5000
Epoch 75/100	
	1s 601us/step - loss: 6196471.5000
Epoch 76/100	1s 618us/step - loss: 6063012.0000
Epoch 77/100	15 010us/step - toss. 0003012.0000
•	1s 627us/step - loss: 9765900.0000
Epoch 78/100	23 02743, 5100
	1s 621us/step - loss: 3640505.0000
Epoch 79/100	
1465/1465 ——————	1s 611us/step - loss: 2069790.0000
Epoch 80/100	
	1s 612us/step - loss: 6342876.0000
Epoch 81/100	
	1s 635us/step - loss: 3542475.7500
Epoch 82/100	1. 600us/ston loss, 5025165 0000
Epoch 83/100	1s 609us/step - loss: 5935165.0000
	1s 608us/step - loss: 2233988.5000
Epoch 84/100	23 00003/3 CCp 1033: 2233300:3000
	1s 622us/step - loss: 3852311.7500
Epoch 85/100	,
	1s 612us/step - loss: 6048845.5000
Epoch 86/100	
1465/1465 ——————	1s 621us/step - loss: 2404944.0000

```
Epoch 87/100
1465/1465 -
                           —— 1s 619us/step – loss: 4234534.5000
Epoch 88/100
                              - 1s 615us/step - loss: 7335539.5000
1465/1465 -
Epoch 89/100
                              - 1s 620us/step - loss: 5690713.5000
1465/1465 -
Epoch 90/100
1465/1465 -
                              - 1s 629us/step - loss: 4219930.0000
Epoch 91/100
1465/1465 -
                              - 1s 602us/step - loss: 2871875.0000
Epoch 92/100
1465/1465 -
                             - 1s 609us/step - loss: 2358532.7500
Epoch 93/100
1465/1465 -
                             - 1s 611us/step - loss: 1482917.2500
Epoch 94/100
1465/1465 -
                              - 1s 619us/step - loss: 3324223.5000
Epoch 95/100
1465/1465 -
                             - 1s 621us/step - loss: 2912479.0000
Epoch 96/100
1465/1465 -
                              - 1s 633us/step - loss: 5956584.5000
Epoch 97/100
1465/1465 —
                             - 1s 631us/step - loss: 5774515.0000
Epoch 98/100
1465/1465 —
                           1s 628us/step - loss: 2949848.2500
Epoch 99/100
1465/1465 -
                           1s 617us/step - loss: 2676090.0000
Epoch 100/100
1465/1465 —
                           --- 1s 618us/step - loss: 1814331.3750
733/733 —
                           - 1s 697us/step
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self. initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2930/2930 -
                           3s 625us/step - loss: 9030847.0000
Epoch 2/50
2930/2930 -
                            — 2s 631us/step - loss: 6973818.5000
Epoch 3/50
2930/2930 -
                           2s 631us/step - loss: 4058446.0000
Epoch 4/50
2930/2930 -
                             - 2s 630us/step - loss: 2978883.7500
Epoch 5/50
2930/2930 -
                           2s 630us/step - loss: 4071114.7500
Epoch 6/50
2930/2930 -
                             - 2s 634us/step - loss: 2836112.5000
```

Frank 7/50		
Epoch 7/50	2s 620us/step - loss: 3147102.2500	۱
Epoch 8/50	25 02003/31ep - 1033. 314/102.2300	'
	2s 630us/step - loss: 2963694.0000)
Epoch 9/50	23 03043, 3104	
	2s 620us/step - loss: 2790396.7500)
Epoch 10/50		
2930/2930 —————	2s 626us/step - loss: 3872015.7500)
Epoch 11/50		
	2s 621us/step - loss: 1678529.3750)
Epoch 12/50		
	2s 623us/step - loss: 4103715.7500)
Epoch 13/50	3 - C4Cy-/-t 1 44C2F02 F000	
Epoch 14/50	2s 646us/step - loss: 4463583.5000	,
	2s 620us/step - loss: 2488403.2500	1
Epoch 15/50	23 02003/31Cp 1033. 2400403.2300	,
	2s 624us/step - loss: 4497307.0000)
Epoch 16/50	•	
2930/2930 —————	2s 632us/step - loss: 7117512.5000)
Epoch 17/50		
	2s 631us/step - loss: 2402176.5000)
Epoch 18/50	2- C22 (atam 1 2725204 2506	
Epoch 19/50	2s 623us/step - loss: 2735291.2500)
2930/2930	2s 635us/step - loss: 2242254.5000	1
Epoch 20/50	23 03303/31Cp 1033: 2242234:3000	,
	2s 621us/step - loss: 2313301.2500)
Epoch 21/50	·	
	2s 628us/step - loss: 2909158.2500)
Epoch 22/50		
	2s 629us/step - loss: 6030556.0000)
Epoch 23/50	2s 622us/step - loss: 7654817.5000	à
Epoch 24/50	25 022u3/5tep - t055. /05401/15000	'
	2s 726us/step - loss: 3016869.7500)
Epoch 25/50		
2930/2930 ——————	2s 707us/step - loss: 3197601.7500)
Epoch 26/50		
	2s 704us/step - loss: 2103597.0000)
Epoch 27/50	2 605 () 1 4042720 5000	
	2s 695us/step - loss: 4912729.5000)
Epoch 28/50	2s 699us/step - loss: 1742668.6250	1
Epoch 29/50	23 09903/31Cp - 1033: 1/42000:0230	,
	2s 680us/step - loss: 4838113.5000)
Epoch 30/50	. ,	
	2s 701us/step - loss: 1439453.7500)
Epoch 31/50		
2930/2930 —————	2s 702us/step - loss: 7843301.5000)

```
Epoch 32/50
2930/2930 -
                         2s 696us/step - loss: 8986550.0000
Epoch 33/50
2930/2930 -
                           — 2s 698us/step - loss: 6472256.5000
Epoch 34/50
                            - 2s 693us/step - loss: 2386003.2500
2930/2930 -
Epoch 35/50
2930/2930 -
                            - 2s 708us/step - loss: 3022656.5000
Epoch 36/50
2930/2930 -
                            - 2s 698us/step - loss: 1887240.0000
Epoch 37/50
2930/2930 -
                          2s 694us/step - loss: 2971353.0000
Epoch 38/50
2930/2930 -
                          2s 690us/step - loss: 5690362.5000
Epoch 39/50
2930/2930 -
                            — 2s 671us/step - loss: 8692259.0000
Epoch 40/50
2930/2930 -
                          2s 700us/step - loss: 2340687.2500
Epoch 41/50
2930/2930 -
                            - 2s 686us/step - loss: 1929215.6250
Epoch 42/50
2930/2930 -
                          — 2s 692us/step - loss: 9187110.0000
Epoch 43/50
2930/2930 -
                          2s 690us/step - loss: 1492656.2500
Epoch 44/50
2930/2930 -
                         2s 668us/step - loss: 4275896.0000
Epoch 45/50
2930/2930 —
                          2s 684us/step - loss: 8995102.0000
Epoch 46/50
2930/2930 -
                             - 2s 698us/step - loss: 2218421.5000
Epoch 47/50
2930/2930 -
                         2s 691us/step - loss: 3398479.7500
Epoch 48/50
2930/2930 -
                            - 2s 695us/step - loss: 5060624.5000
Epoch 49/50
2930/2930 -
                          — 2s 689us/step - loss: 4846827.5000
Epoch 50/50
2930/2930 -
                            - 2s 669us/step - loss: 1872080.5000
                     1s 683us/step
1465/1465 -
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

2930/2930 — **3s** 696us/step - loss: 7903006.0000

Enoch 2/50				
Epoch 2/50 2930/2930 ————————————————————————————————————	25	679us/sten -	1000	1960009 9750
Epoch 3/50	23	0/0us/step -	1055.	1009090:0730
2930/2930 ————	2s	676us/step -	loss:	1372112.5000
Epoch 4/50		от о		
2930/2930 —————	2s	696us/step -	loss:	1145127.6250
Epoch 5/50		•		
2930/2930 —————	2s	699us/step -	loss:	1103150.6250
Epoch 6/50				
2930/2930 —————	2s	697us/step -	loss:	1129500.8750
Epoch 7/50	_	677 / 1	,	10001451 0005
2930/2930 ————————————————————————————————————	2 S	6//us/step -	loss:	1023451.0025
Epoch 8/50 2930/2930 ————————————————————————————————————	26	69/us/stop	10001	1166022 0750
Epoch 9/50	23	004us/step -	1055.	1100932.0730
2930/2930 ————	2s	703us/step -	loss:	1072364.8750
Epoch 10/50		, , , , , , , , , ,		
2930/2930 ——————	2s	689us/step -	loss:	1066124.6250
Epoch 11/50				
2930/2930 —————	2s	681us/step -	loss:	1076726.2500
Epoch 12/50	2 -	676	1	1120104 1250
2930/2930 — Epoch 13/50	25	6/6us/step -	loss:	1138104.1250
2930/2930 ————	25	679us/sten -	lossi	1027936.5000
Epoch 14/50	23	073d3/3tcp		102733013000
2930/2930 —————	2s	686us/step -	loss:	1021395.4375
Epoch 15/50		•		
2930/2930 —————	2s	687us/step -	loss:	1048856.2500
Epoch 16/50	_	604	-	4456700 0000
2930/2930 — Epoch 17/50	25	694us/step -	loss:	1156/82.0000
2930/2930 ————	2¢	663us/sten -	1000	101307/ 7500
Epoch 18/50	23	003и3/31Ср	(033.	101307417300
2930/2930 ————	2s	674us/step -	loss:	1026932.9375
Epoch 19/50		•		
2930/2930 ——————	2s	679us/step -	loss:	1008221.1875
Epoch 20/50	_		-	
2930/2930 ————————————————————————————————————	2s	6/3us/step -	loss:	1063862.5000
Epoch 21/50 2930/2930 ————————————————————————————————————	26	690us /stop	10001	1076075 5000
Epoch 22/50	23	000us/step -	1055.	10/00/3.3000
2930/2930 ————	2s	691us/step -	loss:	1007616.0625
Epoch 23/50				
2930/2930 ——————	2s	711us/step -	loss:	1059427.1250
Epoch 24/50				
2930/2930 —————	2s	755us/step -	loss:	1021679.0625
Epoch 25/50	_	725 /	1	1020200 0425
2930/2930 — Epoch 26/50	2 S	/35us/step -	LOSS:	1020299.8125
2930/2930 ———————	25	769115/sten -	10551	1006201 5625
2330/2330	23	10303/31Ch -	1033.	100073117077

5 1 27/50	
Epoch 27/50	2s 702us/step - loss: 1062075.1250
Epoch 28/50	25 /02u3/step - toss. 10020/3.1230
	2s 695us/step - loss: 980938.1875
Epoch 29/50	
	2s 697us/step - loss: 988319.8750
Epoch 30/50	
	2s 700us/step - loss: 983771.7500
Epoch 31/50	2s 707us/step - loss: 985061.6250
Epoch 32/50	25 /0/us/step - toss. 983001.0230
	2s 717us/step - loss: 1017602.0625
Epoch 33/50	
2930/2930 ————	2s 772us/step - loss: 987957.3125
Epoch 34/50	
	2s 701us/step - loss: 1111930.1250
Epoch 35/50	3- 750/atam lasar 1047510 0125
Epoch 36/50	2s 759us/step - loss: 1047519.8125
2930/2930 ————	2s 714us/step - loss: 1064449.0000
Epoch 37/50	23 /1103/3100
	2s 706us/step - loss: 1087245.2500
Epoch 38/50	
	2s 738us/step - loss: 1021130.3750
Epoch 39/50	• 746 / /
	2s 746us/step - loss: 948064.5625
Epoch 40/50	2s 745us/step - loss: 1081870.7500
Epoch 41/50	25 /43u3/3tep - toss. 10010/0./300
	2s 700us/step - loss: 1066210.0000
Epoch 42/50	
	2s 727us/step - loss: 1099655.7500
Epoch 43/50	
	2s 726us/step - loss: 1024291.2500
Epoch 44/50	2s 701us/step - loss: 1060354.5000
Epoch 45/50	25 /01u3/step - toss. 1000334.3000
	2s 697us/step - loss: 1023054.6875
Epoch 46/50	
2930/2930 —————	2s 726us/step - loss: 1008792.3125
Epoch 47/50	
	2s 727us/step - loss: 984210.3125
Epoch 48/50	2c 706us/ston loss, 1100606 5000
Epoch 49/50	2s 706us/step - loss: 1100606.5000
	2s 709us/step - loss: 973548.4375
Epoch 50/50	- 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
2930/2930 ————	2s 713us/step - loss: 1043468.1875
1465/1465 ———————	—— 1s 698us/step
Epoch 1/50	

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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super(). init (activity_regularizer=activity_regularizer, **kwargs)

super()init(activity_re	gu L	arızer=actı\	/11	ty_regu	ılarızer,	**kwargs
2930/2930 —————	3s	698us/step	-	loss:	8702978.	0000
Epoch 2/50						
2930/2930 —————	2s	712us/step	-	loss:	5363195.	5000
Epoch 3/50						
2930/2930 —————	2s	734us/step	-	loss:	3333026.	5000
Epoch 4/50						
2930/2930 ————	2s	663us/step	-	loss:	5008185.	0000
Epoch 5/50						
2930/2930 ————	2s	693us/step	-	loss:	1975319.	2500
Epoch 6/50	_	604 ()		-	2400007	
2930/2930 —————	2 s	691us/step	-	loss:	3100697.	0000
Epoch 7/50	2-	C 10 / a + a		1	4121002	2500
2930/2930 ————————————————————————————————————	25	648US/STEP	_	loss:	4131083.	2500
Epoch 8/50 2930/2930 ————————————————————————————————————	26	652us /stop		10001	1500520	aaaa
Epoch 9/50	25	032us/step	_	1055.	4300320	0000
2930/2930 ————	25	640us/sten	_	lossi	2047026	5000
Epoch 10/50	23	04003/31СР			23473201	3000
2930/2930 ————	2s	632us/step	_	loss:	1593634.	7500
Epoch 11/50						
2930/2930 ————	2s	646us/step	_	loss:	7074833.	0000
Epoch 12/50						
2930/2930 —————	2s	619us/step	-	loss:	1645489.	1250
Epoch 13/50						
2930/2930 —————	2s	606us/step	-	loss:	2315144.	7500
Epoch 14/50						
2930/2930 ————	2s	585us/step	-	loss:	8542773.	0000
Epoch 15/50				_		
2930/2930 ————	2s	628us/step	-	loss:	2791695.	7500
Epoch 16/50	_	633 / 1		,	2257420	0000
2930/2930 ————————————————————————————————————	2 S	632us/step	-	LOSS:	235/128.	0000
Epoch 17/50	2.	62046/6+00		10001	1042262	EAAA
2930/2930 — Epoch 18/50	25	639us/step	_	1055;	1943202	שששכ
2930/2930 ————	26	656us/sten	_	1000	1003966	5000
Epoch 19/50	23	030us/step		1055.	1993000	2000
2930/2930 ————	25	598us/sten	_	lossi	2271575	5000
Epoch 20/50	_3	23043/31ср		.0551	,,	2300
2930/2930 ————	2s	612us/sten	_	loss:	2075454.	0000
Epoch 21/50		51200, 5 сор			_0.5.5	
2930/2930 ————	2s	806us/step	_	loss:	3036783.	7500
·		/ 9				

Epoch 22/50	
2930/2930	- 2s 795us/step - loss: 2929011.5000
Epoch 23/50	- 23 / 33 d 3 / 3 t C p
	- 3s 1ms/step - loss: 5427997.5000
Epoch 24/50	23 1m3, 3 ccp
	- 5s 2ms/step - loss: 7064016.0000
Epoch 25/50	22 2, 5 (2)
	- 3s 878us/step - loss: 4084045.2500
Epoch 26/50	, , , , , , , , , , , , , , , , , , ,
	- 2s 605us/step - loss: 3111707.2500
Epoch 27/50	
2930/2930 —————	- 2s 586us/step - loss: 5854174.0000
Epoch 28/50	
2930/2930 —————	- 2s 582us/step - loss: 2846165.5000
Epoch 29/50	
2930/2930 —————	- 2s 578us/step - loss: 1308786.0000
Epoch 30/50	
	- 2s 591us/step - loss: 3360442.2500
Epoch 31/50	2 504 / 1 2 245 454 7500
	- 2s 581us/step - loss: 3415461.7500
Epoch 32/50	- 2s 827us/step - loss: 2966728.2500
Epoch 33/50	- 25 82/us/step - toss: 2900/28.2500
	- 2s 698us/step - loss: 3371343.7500
Epoch 34/50	- 23 030u3/3tep - t033: 55/1545:/500
	- 2s 691us/step - loss: 3552755.0000
Epoch 35/50	25 05 145, 5 top 10551 5552,5510000
	- 2s 687us/step - loss: 1373012.6250
Epoch 36/50	
2930/2930 —————	- 2s 689us/step - loss: 3893236.2500
Epoch 37/50	
2930/2930 —————	- 2s 692us/step - loss: 1834520.7500
Epoch 38/50	
	- 2s 711us/step - loss: 5825961.0000
Epoch 39/50	. 744 / / . 7400500 5000
	- 2s 714us/step - loss: 7408526.5000
Epoch 40/50	- 3s 891us/step - loss: 6741097.5000
Epoch 41/50	- 35 891us/Step - toss: 6/4109/.5000
	- 2s 704us/step - loss: 1198862.5000
Epoch 42/50	- 23 /04u3/3tep - t033: 1130002:3000
	- 2s 714us/step - loss: 2907297.0000
Epoch 43/50	20 / 1 / 43 / 3 / 50 / 50 / 50 / 50 / 50 / 50 / 50
	- 2s 773us/step - loss: 5062499.5000
Epoch 44/50	, p
	- 2s 711us/step - loss: 1628311.8750
Epoch 45/50	
	- 2s 733us/step - loss: 2858145.5000
Epoch 46/50	
2930/2930 —————	- 3s 865us/step - loss: 2371674.2500

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                       3s 880us/step - loss: 4844629.5000
Epoch 2/75
                          1s 844us/step - loss: 2750421.2500
1465/1465 -
Epoch 3/75
1465/1465 -
                           --- 1s 818us/step - loss: 5640535.0000
Epoch 4/75
1465/1465 -
                            - 1s 828us/step - loss: 6171780.5000
Epoch 5/75
1465/1465 -
                             - 1s 859us/step - loss: 5641629.5000
Epoch 6/75
1465/1465 -
                            — 1s 906us/step - loss: 3471756.0000
Epoch 7/75
                          1s 895us/step - loss: 3407775.7500
1465/1465 -
Epoch 8/75
1465/1465 -
                             - 2s 1ms/step - loss: 5255645.0000
Epoch 9/75
                             - 1s 900us/step - loss: 2929963.5000
1465/1465 -
Epoch 10/75
                            - 1s 836us/step - loss: 4213952.5000
1465/1465 -
Epoch 11/75
1465/1465 -
                             - 1s 807us/step - loss: 2459308.5000
Epoch 12/75
1465/1465 -
                             - 1s 812us/step - loss: 1578157.5000
Epoch 13/75
1465/1465 -
                          ---- 1s 827us/step - loss: 1817265.0000
Epoch 14/75
1465/1465 -
                             - 1s 824us/step - loss: 1216985.0000
Epoch 15/75
                           1s 828us/step - loss: 4071654.0000
1465/1465 -
Epoch 16/75
1465/1465 -
                             - 1s 828us/step - loss: 1993957.3750
```

Frank 17/75	
Epoch 17/75	1s 819us/step - loss: 2846669.5000
Epoch 18/75	15 81905/Step - toss. 2840009.3000
	1s 827us/step - loss: 4023826.2500
Epoch 19/75	
1465/1465 ———————	1s 839us/step - loss: 1998819.7500
Epoch 20/75	·
	1s 825us/step - loss: 2832338.0000
Epoch 21/75	
	1s 799us/step - loss: 2735012.0000
Epoch 22/75	4 026 / 1 2507507 2500
	1s 826us/step - loss: 2507597.2500
Epoch 23/75	1s 825us/step - loss: 2116051.2500
Epoch 24/75	15 623us/step - toss: 2110031.2300
·	1s 823us/step - loss: 2525397.5000
Epoch 25/75	23 02343, 3 (6)
	1s 792us/step - loss: 4613393.0000
Epoch 26/75	
	1s 832us/step - loss: 4030424.0000
Epoch 27/75	
	1s 826us/step - loss: 2207191.2500
Epoch 28/75	1s 822us/step - loss: 3550770.5000
Epoch 29/75	15 622us/step - toss: 5550//0.5000
1465/1465	1s 796us/step - loss: 2822949.0000
Epoch 30/75	
	1s 830us/step - loss: 9522622.0000
Epoch 31/75	
	1s 838us/step - loss: 6948918.5000
Epoch 32/75	
Epoch 33/75	1s 825us/step - loss: 2203450.5000
	1s 811us/step - loss: 8594924.0000
Epoch 34/75	25 01143, 5 (6) (0331 033132 110000
1465/1465 —————	1s 825us/step - loss: 2380744.0000
Epoch 35/75	
	1s 804us/step - loss: 1792836.8750
Epoch 36/75	
	1s 804us/step - loss: 2339760.0000
Epoch 37/75	1s 809us/step - loss: 3754248.7500
Epoch 38/75	15 80905/Step - toss. 5/54246./500
	1s 810us/step - loss: 2888714.2500
Epoch 39/75	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	1s 812us/step - loss: 4671683.5000
Epoch 40/75	
	1s 821us/step - loss: 1517481.8750
Epoch 41/75	1- 001/
1405/1405	1s 801us/step - loss: 4758173.5000

Epoch 42/75	1s 816us/step - loss: 2553861.0000
Epoch 43/75	15 610us/step - toss: 2555601.0000
	1s 802us/step - loss: 2159456.2500
Epoch 44/75	
1465/1465	1s 801us/step - loss: 4821010.5000
Epoch 45/75	
	1s 805us/step - loss: 3010578.0000
Epoch 46/75	
	1s 778us/step - loss: 4587620.5000
Epoch 47/75	1s 791us/step - loss: 1388008.6250
Epoch 48/75	13 /9105/5tep - toss. 1300000:0230
	1s 797us/step - loss: 3161417.0000
Epoch 49/75	22 7574575459 10551 516111710000
	1s 804us/step - loss: 5983433.0000
Epoch 50/75	
	1s 804us/step - loss: 3972185.5000
Epoch 51/75	
	1s 800us/step - loss: 1789097.6250
Epoch 52/75	1s 805us/step - loss: 3310271.2500
Epoch 53/75	15 80305/5(ep - 1055. 33102/1.2300
	1s 797us/step - loss: 3127877.2500
Epoch 54/75	
	1s 795us/step - loss: 2993941.2500
Epoch 55/75	
	1s 800us/step - loss: 2879946.5000
Epoch 56/75	- 700 /
	1s 796us/step - loss: 4155168.2500
Epoch 57/75	1s 799us/step - loss: 3109233.5000
Epoch 58/75	15 /9905/Step - toss. 5109255.5000
	1s 791us/step - loss: 3712921.0000
Epoch 59/75	
1465/1465 ——————	1s 799us/step - loss: 4056351.0000
Epoch 60/75	_
	1s 795us/step - loss: 8128884.0000
Epoch 61/75	1- 70Fus/ston 1 22F6726 0000
Epoch 62/75	1s 795us/step - loss: 3356726.0000
· ·	1s 795us/step - loss: 1775516.2500
Epoch 63/75	23 /33u3/3tep (0331 1//331012300
	1s 773us/step - loss: 2397670.7500
Epoch 64/75	
	1s 795us/step - loss: 2135613.0000
Epoch 65/75	
	1s 787us/step - loss: 3627948.2500
Epoch 66/75	1s 795us/step - loss: 1649796.5000
1403/1403	15 /3505/Steb - 1022: 1049/30.5000

```
Epoch 67/75
1465/1465 -
                          ---- 1s 784us/step - loss: 1782323.5000
Epoch 68/75
1465/1465 -
                              - 1s 794us/step - loss: 2169153.2500
Epoch 69/75
                             - 1s 793us/step - loss: 4847443.0000
1465/1465 -
Epoch 70/75
1465/1465 -
                              - 1s 769us/step - loss: 1472192.3750
Epoch 71/75
1465/1465 -
                              - 1s 775us/step - loss: 4942412.5000
Epoch 72/75
1465/1465 -
                           1s 772us/step - loss: 3659539.7500
Epoch 73/75
1465/1465 -
                             - 1s 795us/step - loss: 1703489.8750
Epoch 74/75
1465/1465 -
                             - 1s 774us/step - loss: 3765408.0000
Epoch 75/75
1465/1465 -
                           —— 1s 775us/step – loss: 8383034.0000
733/733 —
                         1s 760us/step
Epoch 1/75
```

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2s 762us/step - loss: 3683946.2500
1465/1465 —
Epoch 2/75
                           — 1s 742us/step - loss: 1075651.8750
1465/1465 -
Epoch 3/75
1465/1465 -
                             - 1s 748us/step - loss: 1110545.5000
Epoch 4/75
                             - 1s 766us/step - loss: 1073378.6250
1465/1465 -
Epoch 5/75
                            - 1s 752us/step - loss: 1061453.7500
1465/1465 -
Epoch 6/75
1465/1465 -
                             - 1s 771us/step - loss: 1153998.8750
Epoch 7/75
1465/1465 -
                             - 1s 772us/step - loss: 1026519.4375
Epoch 8/75
                           1s 775us/step - loss: 1000361.5000
1465/1465 -
Epoch 9/75
1465/1465 -
                             - 1s 763us/step - loss: 1043493.1875
Epoch 10/75
1465/1465 -
                            — 1s 761us/step - loss: 1043037.0000
Epoch 11/75
1465/1465 -
                             - 1s 752us/step - loss: 975130.3125
```

Epoch 12/75					
1465/1465 ————————————————————————————————————	1c 7	763us/sten	_	1000	1037/181 3125
Epoch 13/75	13 /	03u3/31ep			103/401.3123
1465/1465 ———————	1s 7	62us/step	_	loss:	1046365.0000
Epoch 14/75		о, о тор			
1465/1465 ——————	1s 7	64us/step	_	loss:	1072446.6250
Epoch 15/75		•			
1465/1465 ———————	1s 7	49us/step	_	loss:	941286.6875
Epoch 16/75					
1465/1465 ———————	1s 7	/62us/step	-	loss:	1058817.5000
Epoch 17/75				-	000700 0075
1465/1465 ————————————————————————————————————	1s /	/54us/step	_	loss:	986/29.93/5
Epoch 18/75 1465/1465 ————————————————————————————————————	16 7	770us /s+an		10001	1020006 0275
Epoch 19/75	15 /	//9us/step	_	1055	1039000.9373
1465/1465 —————	1s 7	764us/sten	_	loss:	967159 5000
Epoch 20/75	13 /	0-443/ 3 сер			30713313000
1465/1465 ————————————————————————————————————	1s 7	/80us/step	_	loss:	1066632.7500
Epoch 21/75					
1465/1465 ——————	1s 7	775us/step	-	loss:	1018717.1875
Epoch 22/75					
1465/1465 —	1s 7	61us/step	-	loss:	1041690.3125
Epoch 23/75	1- 0	22 / - +		1	1027000 2500
1465/1465 — Epoch 24/75	15 8	322us/step	_	LOSS:	103/099.2500
1465/1465 ————————————————————————————————————	1c 8	RAGUS/sten	_	1066.	976311 6875
Epoch 25/75	13	,0003,3 сер			37031110073
1465/1465 ————————————————————————————————————	1s 8	390us/step	_	loss:	1012154.6250
Epoch 26/75		•			
1465/1465 ——————	1s 8	312us/step	-	loss:	1003675.5625
Epoch 27/75					
1465/1465	1s 8	302us/step	-	loss:	1075197.8750
Epoch 28/75 1465/1465 ————————————————————————————————————	16 0	21/11/2/2+00		1000	1002/10 6250
Epoch 29/75	15 0	514u5/5tep	_	1055.	1003410:0230
1465/1465 ————————————————————————————————————	1s 7	/87us/step	_	loss:	1000711.4375
Epoch 30/75		, ,			
1465/1465 ——————	1s 8	331us/step	_	loss:	982900.1875
Epoch 31/75					
1465/1465	1s 7	786us/step	-	loss:	1129749.0000
Epoch 32/75	•			-	1010507 5005
1465/1465 ————————————————————————————————————	IS &	320us/step	_	loss:	1010507.5625
Epoch 33/75 1465/1465 ————————————————————————————————————	16 0	206us /s+on		10001	064570 0000
Epoch 34/75	T2 C	oous/step	_	1035	904J/5 0000
1465/1465 —————	1s °	80us/sten	_	loss:	1009200.7500
Epoch 35/75					
1465/1465 ————————————————————————————————————	1s 8	305us/step	_	loss:	1002389.1875
Epoch 36/75					
1465/1465 ———————	1s 8	313us/step	_	loss:	932634.5000

Enach 27/75	
Epoch 37/75	1s 774us/step - loss: 1083975.1250
Epoch 38/75	13 //4us/step - toss. 10059/5:1250
	1s 807us/step - loss: 1084946.6250
Epoch 39/75	
	1s 943us/step - loss: 1039364.7500
Epoch 40/75	·
1465/1465 ——————	1s 865us/step - loss: 987329.1250
Epoch 41/75	
	1s 788us/step - loss: 1062301.0000
Epoch 42/75	
	1s 881us/step - loss: 944248.0625
Epoch 43/75	1s 829us/step - loss: 1055458.1250
Epoch 44/75	15 629us/step - toss: 1033436.1230
	1s 719us/step - loss: 1072983.5000
Epoch 45/75	23 / 13d3/ 3 cep
	1s 732us/step - loss: 985579.5000
Epoch 46/75	
	1s 745us/step - loss: 1024445.2500
Epoch 47/75	
	1s 767us/step - loss: 1034295.8750
Epoch 48/75	1s 785us/step - loss: 1088552.5000
Epoch 49/75	15 /85us/step - toss: 1088552.5000
	1s 779us/step - loss: 975337.5000
Epoch 50/75	10 7,7545, 5155
	1s 854us/step - loss: 991730.0625
Epoch 51/75	
	1s 812us/step - loss: 1120658.2500
Epoch 52/75	
1465/1465 ————————————————————————————————————	1s 953us/step - loss: 1057544.2500
Epoch 53/75	1s 794us/step - loss: 952488.0625
Epoch 54/75	13 / 94u3/ Step — 1033: 932400:0023
	1s 798us/step - loss: 1076009.7500
Epoch 55/75	
1465/1465 ——————	1s 825us/step - loss: 962652.9375
Epoch 56/75	
	1s 821us/step - loss: 987620.0625
Epoch 57/75	1 005 / 1 1 1040440 0005
	1s 805us/step - loss: 1048442.0625
Epoch 58/75	1s 870us/step - loss: 972323.1875
Epoch 59/75	15 0/003/step - toss. 9/2323:10/3
	1s 857us/step - loss: 1030413.7500
Epoch 60/75	1000.101/300
	1s 802us/step - loss: 1080495.1250
Epoch 61/75	
1465/1465 ———————	1s 750us/step - loss: 1001904.6250

```
Epoch 62/75
1465/1465 -
                        1s 763us/step - loss: 954964.5625
Epoch 63/75
1465/1465 -
                           — 1s 770us/step - loss: 959824.9375
Epoch 64/75
                            - 1s 818us/step - loss: 1003859.4375
1465/1465 -
Epoch 65/75
1465/1465 -
                            - 1s 808us/step - loss: 1045799.0000
Epoch 66/75
1465/1465 -
                            - 1s 934us/step - loss: 1008261.6875
Epoch 67/75
1465/1465 -
                          1s 881us/step - loss: 1000301.4375
Epoch 68/75
1465/1465 -
                           — 1s 872us/step - loss: 1017884.8125
Epoch 69/75
1465/1465 -
                           - 1s 822us/step - loss: 1070662.6250
Epoch 70/75
1465/1465 -
                          1s 879us/step - loss: 980047.3750
Epoch 71/75
1465/1465 -
                            - 1s 828us/step - loss: 981612.1875
Epoch 72/75
1465/1465 -
                          —— 1s 806us/step — loss: 953549.5625
Epoch 73/75
1465/1465 -
                         1s 792us/step - loss: 989525.8125
Epoch 74/75
1465/1465 -
                        1s 831us/step - loss: 979630.1875
Epoch 75/75
1465/1465 —
                        1s 852us/step - loss: 991649.6250
                  1s 786us/step
733/733 —
Epoch 1/75
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                         3s 933us/step - loss: 5999087.0000
Epoch 2/75
1465/1465 -
                          1s 865us/step - loss: 5085270.0000
Epoch 3/75
1465/1465 -
                        1s 860us/step - loss: 2472662.2500
Epoch 4/75
1465/1465 -
                            - 1s 864us/step - loss: 1593994.5000
Epoch 5/75
1465/1465 -
                         1s 858us/step - loss: 2995349.2500
Epoch 6/75
1465/1465 -
                            - 1s 856us/step - loss: 2478643.5000
```

Frank 7/75	
Epoch 7/75	- 1s 851us/step - loss: 1707948.0000
Epoch 8/75	- 15 031u5/step - t055. 1/0/940.0000
	- 1s 836us/step - loss: 1612782.8750
Epoch 9/75	25 03043, 3 ccp
	- 1s 904us/step - loss: 4591850.0000
Epoch 10/75	
	- 1s 809us/step - loss: 2219976.2500
Epoch 11/75	·
1465/1465 —————————	- 1s 797us/step - loss: 2500148.7500
Epoch 12/75	
	- 1s 780us/step - loss: 2565912.5000
Epoch 13/75	
	- 1s 758us/step - loss: 3778017.5000
Epoch 14/75	1c 774us/ston loss, 2712070 2500
Epoch 15/75	- 1s 774us/step - loss: 3712879.2500
	- 1s 744us/step - loss: 6695395.5000
Epoch 16/75	- 13 /44u3/3ccp
1465/1465	- 1s 757us/step - loss: 6102009.5000
Epoch 17/75	
1465/1465	- 1s 745us/step - loss: 4407490.0000
Epoch 18/75	
	- 1s 785us/step - loss: 2582281.7500
Epoch 19/75	
	- 1s 742us/step - loss: 4490732.0000
Epoch 20/75	1- 750/ 1 2021005 0000
	- 1s 756us/step - loss: 3621895.0000
Epoch 21/75	- 1s 734us/step - loss: 7295946.5000
Epoch 22/75	- 15 /34d3/Step - toss: /293940:3000
•	- 1s 749us/step - loss: 2947729.7500
Epoch 23/75	
	- 1s 723us/step - loss: 5208984.5000
Epoch 24/75	
	- 1s 724us/step - loss: 3215066.2500
Epoch 25/75	
	- 1s 722us/step - loss: 3474307.7500
Epoch 26/75	1- 722/
	- 1s 733us/step - loss: 2470748.5000
Epoch 27/75	- 1s 726us/step - loss: 3512272.5000
Epoch 28/75	- 13 /2003/3tep - toss: 33122/2:3000
	- 1s 721us/step - loss: 1713861.2500
Epoch 29/75	
	- 1s 820us/step - loss: 3546010.5000
Epoch 30/75	
	- 1s 760us/step - loss: 9243668.0000
Epoch 31/75	
1465/1465 ————————	- 1s 738us/step - loss: 4733049.5000

E 22.77E	
Epoch 32/75	1s 728us/step - loss: 4516542.0000
Epoch 33/75	15 /2005/Step - toss. 4510542.0000
	1s 722us/step - loss: 5859418.5000
Epoch 34/75	
1465/1465 ———————	1s 742us/step - loss: 3095486.0000
Epoch 35/75	
	1s 741us/step - loss: 2901292.5000
Epoch 36/75	
	1s 734us/step - loss: 1409801.8750
Epoch 37/75	1s 729us/step - loss: 6930408.5000
Epoch 38/75	15 /29us/step = toss. 0930408.3000
	1s 741us/step - loss: 5448278.0000
Epoch 39/75	1000 0000
	1s 732us/step - loss: 3874453.2500
Epoch 40/75	
	1s 757us/step - loss: 6539328.0000
Epoch 41/75	
	1s 745us/step - loss: 2079752.2500
Epoch 42/75	1s 731us/step - loss: 5814644.5000
Epoch 43/75	15 /31u5/5tep - toss: 3614044.3000
	1s 735us/step - loss: 2752702.2500
Epoch 44/75	25 / 35 d5 / 5 top
	1s 737us/step - loss: 3456343.2500
Epoch 45/75	
	1s 743us/step - loss: 3500195.2500
Epoch 46/75	
	1s 723us/step - loss: 4537296.0000
Epoch 47/75	1s 730us/step - loss: 6068367.0000
Epoch 48/75	15 /3003/5tep - toss. 000030/10000
	1s 717us/step - loss: 6120682.5000
Epoch 49/75	
1465/1465 ———————	1s 714us/step - loss: 3699141.5000
Epoch 50/75	
	1s 719us/step - loss: 2573124.7500
Epoch 51/75	4 700 / 1 4050770 7500
	1s 728us/step - loss: 1853773.7500
Epoch 52/75	1s 726us/step - loss: 3258965.5000
Epoch 53/75	13 /2003/3tcp (033: 3230303:3000
	1s 708us/step - loss: 3408730.7500
Epoch 54/75	. ,
1465/1465 ——————	1s 718us/step - loss: 1519656.1250
Epoch 55/75	
	1s 714us/step - loss: 5342463.5000
Epoch 56/75	1. 722/ohon lass 4247000 2500
1403/1403	1s 722us/step - loss: 1247096.2500

```
Epoch 57/75
1465/1465 -
                          ---- 1s 731us/step - loss: 3254762.7500
Epoch 58/75
1465/1465 -
                              - 1s 741us/step - loss: 2464863.7500
Epoch 59/75
                              - 1s 770us/step - loss: 3372573.5000
1465/1465 -
Epoch 60/75
1465/1465 -
                              - 1s 729us/step - loss: 2677971.7500
Epoch 61/75
1465/1465 -
                              - 1s 713us/step - loss: 2276292.2500
Epoch 62/75
1465/1465 -
                             - 1s 715us/step - loss: 2889071.2500
Epoch 63/75
1465/1465 -
                              - 1s 730us/step - loss: 4005723.0000
Epoch 64/75
1465/1465 -
                              - 1s 726us/step - loss: 6023471.0000
Epoch 65/75
1465/1465 -
                            - 1s 719us/step - loss: 2982514.7500
Epoch 66/75
1465/1465 -
                             - 1s 725us/step - loss: 2522149.0000
Epoch 67/75
1465/1465 -
                             - 1s 725us/step - loss: 5372811.5000
Epoch 68/75
1465/1465 -
                           1s 757us/step - loss: 2388412.7500
Epoch 69/75
1465/1465 -
                           1s 720us/step - loss: 1900401.7500
Epoch 70/75
1465/1465 -
                             - 1s 716us/step - loss: 1674826.5000
Epoch 71/75
1465/1465 -
                              - 1s 719us/step - loss: 11174396.0000
Epoch 72/75
                           1s 713us/step - loss: 1367040.6250
1465/1465 -
Epoch 73/75
1465/1465 -
                             - 1s 716us/step - loss: 4457808.5000
Epoch 74/75
1465/1465 -
                             - 1s 713us/step - loss: 10356080.0000
Epoch 75/75
1465/1465 —
                            - 1s 716us/step - loss: 2841675.7500
                       1s 745us/step
733/733 —
Epoch 1/50
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

1465/1465 — **2s** 672us/step - loss: 11202031.0000

Enoch 2/50	
Epoch 2/50	- 1s 706us/step - loss: 6608467.0000
Epoch 3/50	- 15 /0003/Step - toss. 0000407.0000
	- 1s 710us/step - loss: 6549660.0000
Epoch 4/50	
	- 1s 646us/step - loss: 5462528.5000
Epoch 5/50	, ,
1465/1465	- 1s 686us/step - loss: 4900520.0000
Epoch 6/50	
	- 1s 719us/step - loss: 3171758.7500
Epoch 7/50	
	- 1s 721us/step - loss: 2344292.5000
Epoch 8/50	1- (04/
	- 1s 684us/step - loss: 2415104.0000
Epoch 9/50	- 1s 735us/step - loss: 4352309.0000
Epoch 10/50	- 15 /3303/31ep - 1033: 4332303:0000
	- 1s 760us/step - loss: 2928206.5000
Epoch 11/50	25 / 6643/ 5 tep
1465/1465	- 1s 687us/step - loss: 4001611.5000
Epoch 12/50	·
1465/1465	- 1s 685us/step - loss: 5087152.5000
Epoch 13/50	
	- 1s 685us/step - loss: 4093710.5000
Epoch 14/50	
	- 1s 697us/step - loss: 1491775.2500
Epoch 15/50	1- 640/
	- 1s 648us/step - loss: 3497553.5000
Epoch 16/50	- 1s 668us/step - loss: 2860510.0000
Epoch 17/50	— 13 000d3/3tcp t033. 2000510.0000
•	- 1s 650us/step - loss: 5970602.0000
Epoch 18/50	,
1465/1465	- 1s 673us/step - loss: 2467963.5000
Epoch 19/50	
	- 1s 607us/step - loss: 2841114.5000
Epoch 20/50	
	- 1s 697us/step - loss: 3686283.5000
Epoch 21/50	1c 660us/stop loss, 4541002 5000
Epoch 22/50	- 1s 660us/step - loss: 4541083.5000
•	- 1s 624us/step - loss: 1923319.8750
Epoch 23/50	— 13 02403/3 CCp
	- 1s 632us/step - loss: 4093067.0000
Epoch 24/50	
	- 1s 687us/step - loss: 3565877.0000
Epoch 25/50	
	- 1s 640us/step - loss: 5180738.5000
Epoch 26/50	
1465/1465 ————————	- 1s 667us/step - loss: 2141156.5000

Fr 27 /F0	
Epoch 27/50	1s 707us/step - loss: 4920071.0000
Epoch 28/50	23 /0/u3/3ccp (033: 43200/1:0000
	1s 689us/step - loss: 2379463.5000
Epoch 29/50	· '
	1s 677us/step - loss: 2956452.7500
Epoch 30/50	·
1465/1465 ————————	1s 647us/step - loss: 2037397.0000
Epoch 31/50	
	1s 632us/step - loss: 2064018.6250
Epoch 32/50	-
	1s 619us/step - loss: 5334037.0000
Epoch 33/50	
	1s 696us/step - loss: 3628426.5000
Epoch 34/50	1c 650uc/c+on local 1677164 2750
Epoch 35/50	1s 658us/step - loss: 1677164.3750
	1s 629us/step - loss: 2219927.2500
Epoch 36/50	13 02903/3tcp t033: 221992/12900
1465/1465	1s 636us/step - loss: 3850065.5000
Epoch 37/50	,
	1s 680us/step - loss: 3107392.0000
Epoch 38/50	
1465/1465 ———————	1s 738us/step - loss: 3617833.5000
Epoch 39/50	
	1s 675us/step - loss: 4260071.5000
Epoch 40/50	
	1s 668us/step - loss: 4119409.7500
Epoch 41/50	1- (40/
Epoch 42/50	1s 649us/step - loss: 3815171.2500
•	1s 640us/step - loss: 3321403.5000
Epoch 43/50	15 04003/5tep - toss. 3321403.3000
	1s 617us/step - loss: 2570034.2500
Epoch 44/50	
	1s 616us/step - loss: 1981958.5000
Epoch 45/50	
1465/1465 ——————	1s 609us/step - loss: 2384545.7500
Epoch 46/50	
	1s 606us/step - loss: 3166013.7500
Epoch 47/50	
	1s 605us/step - loss: 2990858.0000
Epoch 48/50	1- 622 (-1 1 4401604 5000
	1s 623us/step - loss: 4401684.5000
Epoch 49/50	1s 650us/step - loss: 2871653.5000
Epoch 50/50	13 03mm2/2/ch - (022: 50/1032:2000
	1s 647us/step - loss: 2811980.0000
733/733 — 1	s 726us/step
Epoch 1/50	
1 * * * * * * * * * * * * * * * * * * *	

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super(). init (activity regularizer=activity regularizer, **kwarqs)

super()init(activity_re				
1465/1465 —————	2s	614us/step -	loss:	9213145.0000
Epoch 2/50				
1465/1465 —————	1 s	703us/step -	loss:	6316014.0000
Epoch 3/50				
1465/1465 —————	1 s	612us/step -	loss:	3211448.5000
Epoch 4/50				
1465/1465 ————	1 s	615us/step -	loss:	1968879.1250
Epoch 5/50			_	
1465/1465	1s	608us/step –	loss:	1550680.2500
Epoch 6/50		644 / 1		4.402225 6250
1465/1465 ————————————————————————————————————	TS	611us/step -	loss:	1483225.6250
Epoch 7/50	1.	C07 / a + a =	1	1241522 0000
1465/1465 ————————————————————————————————————	IS	60/us/step -	loss:	1241532.0000
1465/1465 ————————————————————————————————————	1.	707us /stop	10001	1100261 2750
Epoch 9/50	12	/0/us/step -	1055.	1100301:3730
1465/1465 ————	1 c	704us/sten -	lossi	1105762 1250
Epoch 10/50	13	70-403/3 ССР		113370211230
1465/1465 ————	1s	635us/step -	loss:	1119954.3750
Epoch 11/50				
1465/1465 ——————	1 s	619us/step -	loss:	1072244.6250
Epoch 12/50		-		
1465/1465	1 s	603us/step -	loss:	1066631.5000
Epoch 13/50				
1465/1465 —————	1 s	604us/step -	loss:	1077464.0000
Epoch 14/50				
1465/1465	1 s	606us/step -	loss:	1069837.3750
Epoch 15/50			_	
1465/1465	1 s	605us/step -	loss:	1133208.7500
Epoch 16/50		F00 / - t	1	4404422 7500
1465/1465 ————————————————————————————————————	IS	598us/step -	loss:	1101133./500
Epoch 17/50 1465/1465	1.	607us /stop	10001	1039976.1875
Epoch 18/50	12	00/us/step -	10551	10399/0:10/3
1465/1465 ————	1 c	60/us/sten -	1000	10676/10 6250
Epoch 19/50	13	00-403/31СР	(033.	100704310230
1465/1465	1s	630us/step -	loss:	1006947.7500
Epoch 20/50		13100, 010p		
1465/1465	1s	620us/step -	loss:	1050134.5000
Epoch 21/50		,		
1465/1465 —————	1s	605us/step -	loss:	975675.8125
		•		

Epoch 22/50	1s 651us/step – loss: 1017750.9	1275
Epoch 23/50	13 03103/3tep - t033: 101//30:9	373
	ls 699us/step – loss: 1049250.1	.250
Epoch 24/50		
	1s 666us/step – loss: 1029736.0	000
Epoch 25/50		
	1s 706us/step – loss: 1000928.5	000
Epoch 26/50	1 - C74 - /-t 1 1004C22 2	750
Epoch 27/50	1s 674us/step – loss: 1084623.3	750
	ls 660us/step - loss: 1120751.7	500
Epoch 28/50	23 00003/300p 1033. 1120/31./	300
	ls 662us/step – loss: 1063215.5	000
Epoch 29/50	•	
1465/1465 ——————	1s 665us/step – loss: 1035239.5	000
Epoch 30/50		
	ls 648us/step – loss: 1011668.8	750
Epoch 31/50	1s 719us/step – loss: 1046395.1	250
Epoch 32/50	15 /1905/Step = toss: 1046395.1	.230
	ls 614us/step - loss: 1063619.6	250
Epoch 33/50		
	ls 607us/step – loss: 1058302.6	250
Epoch 34/50		
	ls 666us/step – loss: 994079.81	.25
Epoch 35/50		
	1s 594us/step – loss: 1224269.8	/50
Epoch 36/50	1s 602us/step - loss: 1025493.6	275
Epoch 37/50	13 00203/31cp 1033: 102343310	075
•	ls 597us/step - loss: 1022796.4	375
Epoch 38/50	·	
	1s 599us/step – loss: 1006493.8	125
Epoch 39/50		
	ls 605us/step – loss: 1011358.6	250
Epoch 40/50	1s 628us/step – loss: 1034769.3	750
Epoch 41/50	13 02003/31ep - 1033: 1034/09:3	750
	ls 602us/step - loss: 1008594.8	750
Epoch 42/50		
1465/1465	1s 596us/step – loss: 998580.87	50
Epoch 43/50		
	1s 607us/step – loss: 1024774.7	500
Epoch 44/50	1c 607uc/c+co locc. 1010105 0	000
Epoch 45/50	1s 607us/step - loss: 1019105.0	ששש
	1s 600us/step - loss: 1054008.1	250
Epoch 46/50	00003, 5 cop	
	ls 601us/step – loss: 1053292.6	250
	•	

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 -
                       2s 717us/step - loss: 11977621.0000
Epoch 2/50
                          1s 738us/step - loss: 7107779.0000
1465/1465 -
Epoch 3/50
1465/1465 -
                           — 1s 728us/step - loss: 11504479.0000
Epoch 4/50
1465/1465 -
                            - 1s 701us/step - loss: 5405136.5000
Epoch 5/50
1465/1465 -
                             - 1s 703us/step - loss: 7189919.0000
Epoch 6/50
1465/1465 -
                           1s 719us/step - loss: 3330457.0000
Epoch 7/50
                          1s 716us/step - loss: 4057460.2500
1465/1465 -
Epoch 8/50
1465/1465 -
                             - 1s 678us/step - loss: 3462551.5000
Epoch 9/50
                            - 1s 705us/step - loss: 4242916.5000
1465/1465 -
Epoch 10/50
                            - 1s 704us/step - loss: 6818706.0000
1465/1465 -
Epoch 11/50
1465/1465 -
                             - 1s 725us/step - loss: 4534213.0000
Epoch 12/50
1465/1465 -
                             - 1s 718us/step - loss: 4019530.2500
Epoch 13/50
                          1s 717us/step - loss: 2030080.8750
1465/1465 -
Epoch 14/50
1465/1465 -
                             - 1s 715us/step - loss: 8310605.0000
Epoch 15/50
1465/1465 -
                           1s 718us/step - loss: 3627046.0000
Epoch 16/50
```

- 1s 783us/step - loss: 5564734.5000

1465/1465 -

Epoch 17/50 1465/1465	1.0	651uc/cton		10001	2001060 7500	
Epoch 18/50	13	opius/steb		1055.	2901000.7500	
1465/1465 ————	1s	813us/sten	_	loss:	4691208.5000	
Epoch 19/50		01343, 3 сер			.03120013000	
1465/1465 —————	1 s	920us/step	_	loss:	8197304.5000	
Epoch 20/50						
1465/1465 —————	1 s	717us/step	-	loss:	3116574.2500	
Epoch 21/50						
1465/1465 ————	1 s	710us/step	-	loss:	3631206.0000	
Epoch 22/50	_			_		
1465/1465	1 s	/04us/step	-	loss:	4335153.5000	
Epoch 23/50 1465/1465 ————————————————————————————————————	1.	704/2+22		1	471F066 F000	
Epoch 24/50	15	/04us/step	_	10551	4/15000.5000	
1465/1465 ————	1ς	701us/sten	_	1055.	3451754.2500	
Epoch 25/50		, 0143, 3 tep			313173112300	
1465/1465	1s	695us/step	_	loss:	3538611.7500	
Epoch 26/50						
1465/1465 —————	1 s	696us/step	-	loss:	3396306.5000	
Epoch 27/50				_		
1465/1465	1s	696us/step	-	loss:	1671155.7500	
Epoch 28/50 1465/1465	1.	600		1	4065557 0000	
Epoch 29/50	15	699us/step	_	toss:	4905557.0000	
1465/1465 ————	1ς	699us/sten	_	1055	1497174.7500	
Epoch 30/50		оззиз, этер			113717117300	
1465/1465 —————	1s	704us/step	_	loss:	3520732.2500	
Epoch 31/50		·				
1465/1465 ————	1 s	889us/step	-	loss:	4309585.5000	
Epoch 32/50	_			_		
1465/1465	1 s	809us/step	-	loss:	2450087.2500	
Epoch 33/50 1465/1465 ————————————————————————————————————	1 c	7/3us/sten		1000	3715240 2500	
Epoch 34/50	12	/43us/step	_	1055.	3/13/40.2300	
1465/1465 ————	1s	733us/step	_	loss:	4893681.0000	
Epoch 35/50						
1465/1465 —————	1 s	819us/step	_	loss:	7027056.5000	
Epoch 36/50						
1465/1465 ————	1 s	805us/step	-	loss:	3902372.7500	
Epoch 37/50	_	740		-	40400040 000	•
1465/1465	1 s	/49us/step	-	loss:	10130610.000	0
Epoch 38/50	1.	721115/5+00		10001	2710505 7500	
1465/1465 Epoch 39/50	т2	/ZIUS/STED	_	10551	7110393 1300	
1465/1465 ————	1s	759us/sten	_	loss:	4766763.0000	
Epoch 40/50		. 2000, 0 сор			11 227 331 330	
1465/1465	1 s	713us/step	_	loss:	2012704.8750	
Epoch 41/50						
1465/1465 —————	1 s	823us/step	-	loss:	2784698.0000	

```
Epoch 42/50
1465/1465 -
                          1s 678us/step - loss: 5223414.5000
Epoch 43/50
1465/1465 -
                             - 1s 671us/step - loss: 1659170.7500
Epoch 44/50
                             - 1s 651us/step - loss: 3347750.2500
1465/1465 -
Epoch 45/50
1465/1465 -
                             - 1s 716us/step - loss: 5605495.5000
Epoch 46/50
1465/1465 -
                             - 1s 745us/step - loss: 4630617.0000
Epoch 47/50
1465/1465 -
                          1s 703us/step - loss: 3414572.5000
Epoch 48/50
1465/1465 -
                            — 1s 650us/step - loss: 3717971.2500
Epoch 49/50
1465/1465 -
                             - 1s 645us/step - loss: 3599813.2500
Epoch 50/50
1465/1465 -
                          1s 660us/step - loss: 2898215.2500
733/733 —
                       1s 695us/step
Epoch 1/75
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
3s 645us/step - loss: 12379683.0000
2930/2930 ---
Epoch 2/75
                         2s 684us/step - loss: 11052682.0000
2930/2930 -
Epoch 3/75
2930/2930 -
                           — 2s 797us/step - loss: 12549087.0000
Epoch 4/75
                            - 2s 679us/step - loss: 9053938.0000
2930/2930 -
Epoch 5/75
                            — 2s 666us/step - loss: 7656162.5000
2930/2930 -
Epoch 6/75
2930/2930 -
                             - 2s 630us/step - loss: 8206866.0000
Epoch 7/75
2930/2930 -
                            - 2s 654us/step - loss: 4379467.5000
Epoch 8/75
                          2s 632us/step - loss: 2258839.0000
2930/2930 -
Epoch 9/75
2930/2930 -
                             - 2s 617us/step - loss: 4111653.7500
Epoch 10/75
2930/2930 -
                          2s 664us/step - loss: 3179506.7500
Epoch 11/75
2930/2930 -
                             - 2s 698us/step - loss: 2926409.2500
```

Fr 10 /75					
Epoch 12/75 2930/2930 ————————————————————————————————————	20	70245/5+00		10001	5202764 0000
Epoch 13/75	25	703us/step	_	1055.	3363704.0000
2930/2930 ————	2s	704us/step	_	loss:	5508081.5000
Epoch 14/75		,			
2930/2930 ——————	2s	719us/step	_	loss:	1751373.6250
Epoch 15/75					
2930/2930 —————	2s	713us/step	-	loss:	1546421.7500
Epoch 16/75	•	600 / 1			7400000 5000
2930/2930 ————————————————————————————————————	25	680us/step	_	loss:	/198283.5000
Epoch 17/75 2930/2930 ————————————————————————————————————	25	698us/sten	_	1055.	4191472 7500
Epoch 18/75	23	030и3/31ср			413147217300
2930/2930 ————	2s	712us/step	_	loss:	1652173.2500
Epoch 19/75					
2930/2930 ——————	2s	684us/step	-	loss:	2849936.0000
Epoch 20/75	_			_	
2930/2930 ————————————————————————————————————	2s	654us/step	-	loss:	5182124.5000
Epoch 21/75 2930/2930 ————————————————————————————————————	26	610us /stop		10001	2501262 0000
Epoch 22/75	25	oranz/sreb	_	10551	2301203.0000
2930/2930 ————	2s	617us/step	_	loss:	2285209.7500
Epoch 23/75		од, отор			
2930/2930 ——————	2s	603us/step	_	loss:	1679334.5000
Epoch 24/75					
2930/2930 ————	2s	595us/step	-	loss:	3498116.7500
Epoch 25/75	2-	F07 / a.t.a.r		1	2070120 7500
2930/2930 — Epoch 26/75	25	59/us/step	_	loss:	30/9120./500
2930/2930 ————	25	598us/sten	_	loss:	2496741.5000
Epoch 27/75		330и3, 3 сер			213071113000
2930/2930 —————	2s	603us/step	_	loss:	4884040.0000
Epoch 28/75					
2930/2930 —————	2s	596us/step	-	loss:	7090606.0000
Epoch 29/75	2-	C02 / a t a m		1	2515061 5000
2930/2930 — Epoch 30/75	25	603us/step	_	loss:	3515901.5000
2930/2930 ————	25	597us/sten	_	loss:	2385424.2500
Epoch 31/75		337 d37 3 ccp			2303 12 11 2300
2930/2930 —————	2s	597us/step	_	loss:	1817242.5000
Epoch 32/75					
2930/2930 —————	2s	604us/step	-	loss:	2799800.0000
Epoch 33/75		607 ()		-	2022240 0000
2930/2930 ————————————————————————————————————	25	სს/us/step	-	LOSS:	2033210.0000
Epoch 34/75 2930/2930 ————————————————————————————————————	25	607115/5+22	_	10661	2021/18/1 0000
Epoch 35/75	23	00203/316β	_	.033.	202140410000
2930/2930 ————	2s	607us/step	_	loss:	2358369.7500
Epoch 36/75		,			
2930/2930 ——————	2s	595us/step	-	loss:	4566732.5000

Frank 27/75					
Epoch 37/75 2930/2930 ————————————————————————————————————	26	50/us/stop		10001	1652670 0000
Epoch 38/75	25	394us/step	_	1055.	4033070.0000
2930/2930 ————	2s	622us/step	_	loss:	1826955.3750
Epoch 39/75		о			
2930/2930 ——————	2s	597us/step	_	loss:	2891247.7500
Epoch 40/75					
2930/2930 —————	2s	596us/step	-	loss:	2465244.2500
Epoch 41/75	•	602 / 1		-	2020452 7500
2930/2930 ————————————————————————————————————	25	602us/step	_	loss:	3830453.7500
Epoch 42/75 2930/2930 ————————————————————————————————————	25	505us/sten	_	1055	2709540 0000
Epoch 43/75	23	<i>эээ</i> из/ з сер			270334010000
2930/2930 ————	2s	588us/step	_	loss:	3854576.0000
Epoch 44/75					
2930/2930 ——————	2s	593us/step	-	loss:	3400906.5000
Epoch 45/75	_			_	
2930/2930 ————————————————————————————————————	2s	595us/step	-	loss:	2127916.2500
Epoch 46/75 2930/2930 ————————————————————————————————————	26	597us/sten		1000	1952757 5000
Epoch 47/75	25	36/us/step	_	1055.	4032737.3000
2930/2930 ————	2s	593us/step	_	loss:	1645957.8750
Epoch 48/75					
2930/2930 ——————	2s	592us/step	_	loss:	2948489.0000
Epoch 49/75					
2930/2930 ————	2s	589us/step	-	loss:	3108819.7500
Epoch 50/75	2-	C02 / a t a m		1	2721267 5000
2930/2930 — Epoch 51/75	25	603us/step	_	LOSS:	3/3130/.5000
2930/2930 ————	25	604us/sten	_	loss:	3331118.0000
Epoch 52/75		оо тазу з сер			333111010000
2930/2930 —————	2s	593us/step	_	loss:	2048618.3750
Epoch 53/75					
2930/2930 ————	2s	593us/step	-	loss:	1339010.2500
Epoch 54/75	2-	F05 / a.t.a.r.		1	2162644 7500
2930/2930 — Epoch 55/75	25	595us/step	_	LOSS:	3102044.7500
2930/2930 ————	25	590us/sten	_	loss:	3021160.7500
Epoch 56/75		ээсиз, эсер			302110017300
2930/2930 —————	2s	595us/step	_	loss:	1897297.1250
Epoch 57/75					
2930/2930 —————	2s	598us/step	-	loss:	2183288.7500
Epoch 58/75		504		-	1000500 7500
2930/2930 ————————————————————————————————————	25	594us/step	-	loss:	1903530./500
Epoch 59/75 2930/2930 ————————————————————————————————————	25	605us/sten	_	10001	3242037 7500
Epoch 60/75	23	ουσασ/ στορ	_	.033.	224203/1/300
2930/2930 ————	2s	605us/step	_	loss:	6935931.5000
Epoch 61/75					
2930/2930 ——————	2s	613us/step	-	loss:	1548037.6250

```
Epoch 62/75
2930/2930 -
                         2s 590us/step - loss: 1637323.1250
Epoch 63/75
2930/2930 -
                           2s 586us/step - loss: 4617897.0000
Epoch 64/75
                            - 2s 587us/step - loss: 3708456.5000
2930/2930 -
Epoch 65/75
2930/2930 -
                            - 2s 591us/step - loss: 4297066.5000
Epoch 66/75
2930/2930 -
                            - 2s 587us/step - loss: 3444125.5000
Epoch 67/75
2930/2930 -
                          2s 597us/step - loss: 3467918.2500
Epoch 68/75
2930/2930 -
                          2s 612us/step - loss: 2799654.0000
Epoch 69/75
2930/2930 -
                           — 2s 598us/step - loss: 4693418.5000
Epoch 70/75
2930/2930 -
                          2s 588us/step - loss: 4602928.0000
Epoch 71/75
2930/2930 -
                            - 2s 631us/step - loss: 3855944.0000
Epoch 72/75
2930/2930 -
                          2s 688us/step - loss: 2465846.5000
Epoch 73/75
2930/2930 -
                         2s 707us/step - loss: 3499945.7500
Epoch 74/75
2930/2930 -
                        2s 695us/step - loss: 1228056.6250
Epoch 75/75
2930/2930 -
                  2s 759us/step - loss: 4882856.5000
1s 848us/step
1465/1465 -
Epoch 1/75
```

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2930/2930 -
                        3s 688us/step - loss: 9342913.0000
Epoch 2/75
2930/2930 -
                          2s 688us/step - loss: 8258416.0000
Epoch 3/75
                        2s 695us/step - loss: 6388616.5000
2930/2930 -
Epoch 4/75
2930/2930 -
                          2s 728us/step - loss: 4898254.0000
Epoch 5/75
2930/2930 -
                        2s 727us/step - loss: 3635973.0000
Epoch 6/75
2930/2930 -
                           - 2s 805us/step - loss: 2612351.0000
```

Epoch 7/75				
2930/2930 ————	26	736us/sten -	1000	17/227/ 3750
Epoch 8/75	23	/30u3/3tep =	(033.	1/422/4:3/30
2930/2930 ————	2s	701us/step -	loss:	1440417,1250
Epoch 9/75		,		
2930/2930 ——————	2s	717us/step -	loss:	1291210.8750
Epoch 10/75				
2930/2930 —————	2s	727us/step -	loss:	1287849.8750
Epoch 11/75				
2930/2930 —————	2s	738us/step -	loss:	1284748.1250
Epoch 12/75	2-	760/a+a	1	1201404 5000
2930/2930 — Epoch 13/75	25	/odus/step -	LOSS:	1281404.5000
2930/2930 ————	26	680us/sten -	1000	119//05 1250
Epoch 14/75	23	000и3/31Ср	(033.	110440311230
2930/2930 ————	2s	720us/step -	loss:	1141145.2500
Epoch 15/75				
2930/2930 ——————	2s	733us/step -	loss:	1194001.6250
Epoch 16/75				
2930/2930 ————	2s	742us/step -	loss:	1141388.3750
Epoch 17/75 2930/2930 ————————————————————————————————————	20	71246/6+65	10001	1121514 0000
Epoch 18/75	25	/13us/step -	10551	1121314.0000
2930/2930 ————	25	707us/sten -	loss:	1122986.0000
Epoch 19/75			10001	
2930/2930 ——————	2s	694us/step -	loss:	1082176.2500
Epoch 20/75				
2930/2930 —————	2s	735us/step -	loss:	1133025.2500
Epoch 21/75	2 -	C07 / - t	1	1100107 2500
2930/2930 — Epoch 22/75	25	68/us/step -	LOSS:	1188197.2500
2930/2930 ————	25	686us/sten –	1055	1147721 5000
Epoch 23/75		оосиз, этер		111772113000
2930/2930 —————	2s	718us/step -	loss:	1144004.5000
Epoch 24/75				
2930/2930 —————	2s	743us/step -	loss:	1119313.6250
Epoch 25/75	2-	700 / a t a m	1	1120405 2500
2930/2930 — Epoch 26/75	25	708us/step —	toss:	1139403.2300
2930/2930 ————	25	779us/sten –	1055	1131141.6250
Epoch 27/75		7730373100		113114110230
2930/2930 ————	2s	719us/step -	loss:	1038351.1250
Epoch 28/75				
2930/2930 —————	2s	718us/step -	loss:	1082929.3750
Epoch 29/75	_	706 / :	-	4055222 4252
2930/2930 ————————————————————————————————————	25	/26us/step -	loss:	1055232.1250
Epoch 30/75 2930/2930 ————————————————————————————————————	20	726us/sten -	1000	1063053 6250
Epoch 31/75	23	720u3/31ep -	1033.	100202210530
2930/2930 ————	2s	739us/step -	loss:	1017621.4375
		, ,		,=: ===: .0,0

Epoch 32/75				
2930/2930 ————	25	729us/sten -	lossi	1256240 - 3750
Epoch 33/75	23	723u373ccp		123024013730
2930/2930 ————	2s	698us/step -	loss:	1113485.1250
Epoch 34/75		•		
2930/2930 ——————	2s	708us/step -	loss:	1121247.1250
Epoch 35/75				
2930/2930 —————	2s	720us/step –	loss:	1031498.0625
Epoch 36/75	_	775 ()	-	4400445 6050
2930/2930 ————————————————————————————————————	25	//bus/step -	loss:	1132145.6250
Epoch 37/75 2930/2930 ————————————————————————————————————	26	70/us/stop	10001	1015207 0275
Epoch 38/75	23	704u3/3tep -	1055.	1013307.9373
2930/2930 ————	2s	717us/step -	loss:	1031624.4375
Epoch 39/75		, _, a, , , a top	10001	
2930/2930 —————	2s	706us/step -	loss:	1038811.7500
Epoch 40/75				
2930/2930 —————	2s	719us/step -	loss:	1056232.0000
Epoch 41/75	_			
2930/2930 ————————————————————————————————————	2s	/10us/step -	loss:	1013661.3/50
Epoch 42/75 2930/2930 ————————————————————————————————————	20	60/us/stan	10001	1000152 2500
Epoch 43/75	25	094us/step -	1055.	1000132.2300
2930/2930 ————	25	692us/sten -	loss:	1074928.2500
Epoch 44/75		00200, 0100		107.132012300
2930/2930 —————	2s	758us/step -	loss:	1015800.0000
Epoch 45/75				
2930/2930 —————	2s	744us/step -	loss:	1036218.0000
Epoch 46/75	_	744 ()		4070544 5000
2930/2930 ————————————————————————————————————	25	/14us/step -	loss:	10/0511.5000
Epoch 47/75 2930/2930 ————————————————————————————————————	26	703us/sten -	1000	10007// 0000
Epoch 48/75	23	703u3/3tep -	1033.	100074410000
2930/2930 ————	2s	762us/step -	loss:	1060037.7500
Epoch 49/75		, ,		
2930/2930 ——————	2s	834us/step -	loss:	1079766.0000
Epoch 50/75				
2930/2930 ————	2s	782us/step –	loss:	1111910.7500
Epoch 51/75	2-	772 / 0 + 0 =	1	1046755 2125
2930/2930 — Epoch 52/75	25	//Zus/step -	loss:	1040/55.3125
2930/2930 ————	25	701us/sten -	1055	1063081 1250
Epoch 53/75		731d3/3ccp		100500111250
2930/2930 ————	2s	820us/step -	loss:	1060473.1250
Epoch 54/75		, ,		
2930/2930 ——————	2s	735us/step -	loss:	1059753.1250
Epoch 55/75				
2930/2930 ————	2s	779us/step -	loss:	1106170.3750
Epoch 56/75	_	742 / - 1	1	1004020 0750
2930/2930 —————	25	/42us/step -	LOSS:	1084928.8/50

```
Epoch 57/75
2930/2930 -
                         2s 763us/step - loss: 1075604.6250
Epoch 58/75
2930/2930 -
                            — 2s 685us/step - loss: 1021788.7500
Epoch 59/75
                             - 2s 654us/step - loss: 1023983.8750
2930/2930 -
Epoch 60/75
2930/2930 -
                             - 2s 688us/step - loss: 1094849.7500
Epoch 61/75
2930/2930 -
                             - 2s 675us/step - loss: 1067639.7500
Epoch 62/75
2930/2930 -
                            — 2s 683us/step - loss: 988965.4375
Epoch 63/75
2930/2930 -
                            — 2s 674us/step - loss: 1137796.5000
Epoch 64/75
2930/2930 -
                             - 2s 744us/step - loss: 1068861.3750
Epoch 65/75
2930/2930 -
                           2s 679us/step - loss: 1113211.1250
Epoch 66/75
2930/2930 -
                             - 2s 682us/step - loss: 1106963.0000
Epoch 67/75
2930/2930 -
                            — 2s 676us/step - loss: 1109595.7500
Epoch 68/75
2930/2930 -
                          2s 678us/step - loss: 1148743.8750
Epoch 69/75
2930/2930 -
                          2s 654us/step - loss: 1028967.2500
Epoch 70/75
2930/2930 -
                           — 2s 678us/step - loss: 1029717.9375
Epoch 71/75
2930/2930 -
                             - 2s 684us/step - loss: 1068341.3750
Epoch 72/75
2930/2930 -
                          2s 657us/step - loss: 1124838.3750
Epoch 73/75
2930/2930 -
                             - 2s 676us/step - loss: 1096300.5000
Epoch 74/75
2930/2930 -
                            — 2s 654us/step - loss: 1116068.7500
Epoch 75/75
2930/2930 -
                            - 2s 671us/step - loss: 993803.5625
                       1s 675us/step
1465/1465 -
Epoch 1/75
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

2930/2930 — **3s** 669us/step - loss: 11910093.0000

Enach 2/75					
Epoch 2/75 2930/2930 ————————————————————————————————————	25	666us/sten	_	1000	1120605/ 0000
Epoch 3/75	23	000u3/31ep		1033.	11200034.0000
2930/2930 ————	25	667us/sten	_	loss:	7890180.0000
Epoch 4/75		00745,510			,0301001000
2930/2930 ————	2s	644us/step	_	loss:	8370463,0000
Epoch 5/75					
2930/2930 ——————	2s	663us/step	_	loss:	8326370.5000
Epoch 6/75					
2930/2930 —————	2s	645us/step	-	loss:	5722647.5000
Epoch 7/75					
2930/2930 —————	2s	660us/step	-	loss:	3205245.5000
Epoch 8/75	_				
2930/2930 ————————————————————————————————————	2s	63/us/step	-	loss:	26150/2.5000
Epoch 9/75	2.	6F4uc/c+op		10001	2422042 5000
2930/2930 — Epoch 10/75	25	o54uS/Step	_	1055:	3422043.3000
2930/2930 ————	25	630us/sten	_	1000	1862508 0000
Epoch 11/75	23	030u3/31cp			400230010000
2930/2930 ————	2s	656us/step	_	loss:	3250696.0000
Epoch 12/75					
2930/2930 —————	2s	656us/step	_	loss:	7691437.5000
Epoch 13/75					
2930/2930 —————	2s	693us/step	-	loss:	2542144.2500
Epoch 14/75					
2930/2930 —————	2s	663us/step	-	loss:	3110197.5000
Epoch 15/75	_			_	
2930/2930 —————	2s	677us/step	-	loss:	2863890.7500
Epoch 16/75 2930/2930 ————————————————————————————————————	20	701/s+op		10001	2012711 5000
Epoch 17/75	25	/vius/step	_	1055:	2912/11.5000
2930/2930 ————	25	686us/sten	_	1055.	3635423 0000
Epoch 18/75	23	000и3/3 сер			303342310000
2930/2930 ————	2s	672us/step	_	loss:	4090529.2500
Epoch 19/75		, ,			
2930/2930 —————	2s	657us/step	_	loss:	5282118.0000
Epoch 20/75					
2930/2930 —————	2s	784us/step	-	loss:	1937045.8750
Epoch 21/75	_			_	
2930/2930 ————————————————————————————————————	2s	670us/step	-	loss:	1556987.6250
Epoch 22/75	2-	660		1	4201642 F000
2930/2930 ————————————————————————————————————	25	oodus/step	_	1055:	4391042.3000
Epoch 23/75 2930/2930 ————————————————————————————————————	20	653us/sten	_	1000	7686470 5000
Epoch 24/75	43	02203/316h	_	.033.	,000-,01
2930/2930 ————	2s	634us/sten	_	loss:	1817755.8750
Epoch 25/75		10.00,000			_333.0.30
2930/2930 ————	2s	627us/step	_	loss:	1631280.0000
Epoch 26/75					
2930/2930 ——————	2s	645us/step	-	loss:	2424742.2500

Enach 27/75		
Epoch 27/75	2s 644us/step - loss: 2429507.25	00
Epoch 28/75	23 04403/310p 10331 2423307123	00
· ·	2s 626us/step - loss: 7172006.00	00
Epoch 29/75	·	
	2s 624us/step – loss: 7098631 . 50	00
Epoch 30/75		
	2s 619us/step – loss: 4499655.50	00
Epoch 31/75	3- 624/	
Epoch 32/75	2s 634us/step – loss: 1599146.00	00
	2s 643us/step - loss: 10559659.0	1000
Epoch 33/75	23 04303/31Cp 1033: 10339039:0	000
	2s 665us/step - loss: 4826379.00	00
Epoch 34/75		
2930/2930 ——————	2s 689us/step – loss: 2236636 . 00	00
Epoch 35/75		
	2s 639us/step - loss: 4129342.75	00
Epoch 36/75	•	
	2s 623us/step – loss: 2352080.00	00
Epoch 37/75	2s 609us/step – loss: 3435783.00	naa
Epoch 38/75	25 00905/51ep - 1055. 3433/63.00	00
	2s 626us/step - loss: 1499279.25	00
Epoch 39/75		
2930/2930 —————	2s 622us/step - loss: 5741977 . 50	00
Epoch 40/75		
	2s 646us/step – loss: 8973276 . 00	100
Epoch 41/75	• 624 () • • • • • • • • • • • • • • • • • •	
	2s 634us/step - loss: 2970714.50	00
Epoch 42/75	2s 628us/step – loss: 5714822.00	100
Epoch 43/75	23 02003/31ep - 1033: 3/14022:00	00
2930/2930 ————	2s 616us/step - loss: 3928320.75	00
Epoch 44/75	•	
2930/2930 ——————	2s 634us/step – loss: 3538270 . 75	00
Epoch 45/75		
	2s 617us/step - loss: 1410087.75	00
Epoch 46/75	3- (07/	\F.O
2930/2930 ————————————————————————————————————	2s 607us/step – loss: 1887844.12	.50
· ·	2s 634us/step – loss: 1841641.75	aa
Epoch 48/75	23 03403/316p - 1033: 1041041:/3	00
	2s 624us/step - loss: 1434568.50	00
Epoch 49/75	11,1 1 _p 12001 = 10 190010	
	2s 626us/step - loss: 3622341 . 50	00
Epoch 50/75		
	2s 621us/step - loss: 3554824 . 50	100
Epoch 51/75	a 644 / 1 3 0400000 ==	
2930/2930 ——————	2s 611us/step - loss: 2103969.75	00

Epoch 52/75				
2930/2930 ————	26	603us/sten -	1000	1807044 0000
Epoch 53/75	23	003u3/3tep -	1033.	100/944:0000
2930/2930 ————	2s	605us/step -	loss:	3931278,2500
Epoch 54/75				
2930/2930 —————	2s	606us/step -	loss:	1724994.0000
Epoch 55/75		•		
2930/2930 —————	2s	616us/step -	loss:	6173313.5000
Epoch 56/75				
2930/2930 —————	2s	611us/step -	loss:	4934876.5000
Epoch 57/75			_	
2930/2930 ————	2s	670us/step –	loss:	2864753.0000
Epoch 58/75	•	604 / 1	,	2262505 2500
2930/2930 ————————————————————————————————————	ZS	604us/step -	loss:	3262595.2500
Epoch 59/75 2930/2930 ————————————————————————————————————	26	603us/sten -	1000	1721//2 6250
Epoch 60/75	23	003us/step -	1055.	1/21443:0230
2930/2930 ————	25	601us/sten -	loss:	6180295.5000
Epoch 61/75		00143/ 3 сер		010023313000
2930/2930 —————	2s	600us/step -	loss:	9014298.0000
Epoch 62/75		·		
2930/2930 —————	2s	613us/step -	loss:	7300288.5000
Epoch 63/75				
2930/2930 ——————	2s	616us/step -	loss:	4827008.5000
Epoch 64/75	_			
2930/2930 ————————————————————————————————————	2s	616us/step -	loss:	31930/4./500
Epoch 65/75 2930/2930 ————————————————————————————————————	26	60/us/stop	10001	2466500 7500
Epoch 66/75	25	004us/step -	10551	2400300.7300
2930/2930 ————	25	615us/sten -	loss:	2280240.0000
Epoch 67/75		013и3/ 3 сер	(0331	220024010000
2930/2930 —————	2s	606us/step -	loss:	6059335.0000
Epoch 68/75		, ,		
2930/2930 —————	2s	622us/step -	loss:	4606562.0000
Epoch 69/75				
2930/2930 ——————	2s	605us/step -	loss:	3831607.7500
Epoch 70/75	_			
2930/2930 ————————————————————————————————————	2s	612us/step -	loss:	26//31/./500
Epoch 71/75	2.	61646/6400	10001	4715112 0000
2930/2930 — Epoch 72/75	25	olous/step -	1055:	4/15112.0000
2930/2930 ————	25	605us/sten -	lossi	4987282 . 0000
Epoch 73/75		003и3, 3 сер		130720210000
2930/2930 ————	2s	602us/step -	loss:	2124402.5000
Epoch 74/75				
2930/2930 ——————	2s	599us/step -	loss:	5829663.5000
Epoch 75/75				
2930/2930 —————	2s	624us/step -	loss:	3091940.2500
1465/1465	1 s	652us/step		
Epoch 1/75				

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super(). init (activity_regularizer=activity_regularizer, **kwargs)

super()init(activity_re	_			_
2930/2930 ————	- 3s	881us/step	- loss:	5771135.5000
Epoch 2/75				
2930/2930 —————	- 3s	848us/step	- loss:	3404069.0000
Epoch 3/75				
2930/2930 —————	- 2s	842us/step	- loss:	3862681.5000
Epoch 4/75				
2930/2930 ————	- 2s	839us/step	- loss:	4235499.5000
Epoch 5/75				
2930/2930 ————————————————————————————————————	- 3s	878us/step	- loss:	1299672.2500
Epoch 6/75	_	070 / 1	-	4004040 7500
2930/2930 ————————————————————————————————————	- 3s	8/0us/step	- loss:	1921310./500
Epoch 7/75	2-	000/	1	2617254 5000
2930/2930 ————————————————————————————————————	- 35	868US/STEP	- toss:	301/354.5000
Epoch 8/75 2930/2930 ————————————————————————————————————	20	969us/ston	1000	9150406 0000
Epoch 9/75	- 35	ouous/step	- 1055.	0130490.0000
2930/2930 ————	- 3c	850us/sten	- loss:	2905770 2500
Epoch 10/75	33	055u3/3tcp	(033.	230377012300
2930/2930 ————	2 s	834us/step	- loss:	4793511.5000
Epoch 11/75				
2930/2930 ————	2 s	682us/step	- loss:	4356979.5000
Epoch 12/75		•		
2930/2930 ————	2 s	728us/step	- loss:	8187657.5000
Epoch 13/75				
2930/2930 —————	- 3s	883us/step	- loss:	2005259.3750
Epoch 14/75				
2930/2930 ————	- 3s	882us/step	- loss:	2376246.2500
Epoch 15/75	_		_	
2930/2930 —	- 3s	855us/step	- loss:	4797358.5000
Epoch 16/75	2-	000	1	F124742 F000
2930/2930 ————————————————————————————————————	- 3S	860us/step	- LOSS:	5134/42.5000
Epoch 17/75 2930/2930 ————————————————————————————————————	26	7/11/6/6+00	10001	1305314.8750
Epoch 18/75	- 25	/41us/step	- (055:	1303314.0730
2930/2930 —————	- 3c	887us/stan	_ locc:	2581072 2500
Epoch 19/75	- 33	002u3/3tep	- (033.	230197212300
2930/2930 ————	- 3s	878us/sten	- loss:	3420478.7500
Epoch 20/75		2, 345, 3 ccp		5.20.7517500
2930/2930 ————	2 s	820us/sten	- loss:	3706563,5000
Epoch 21/75				
2930/2930 ————	- 2s	836us/step	- loss:	3895043.0000
•	_	, F		

Frank 22/75					
Epoch 22/75 2930/2930 ————————————————————————————————————	20	922us /s+on		10001	1621117 E000
Epoch 23/75	25	ozzus/step	_	1055.	4034147.3000
2930/2930 ————	2s	846us/step	_	loss:	6647104.0000
Epoch 24/75		-			
2930/2930 ——————	3s	852us/step	-	loss:	1567713.3750
Epoch 25/75					
2930/2930 —————	2s	674us/step	-	loss:	2595993.5000
Epoch 26/75	2-	071/		1	1607672 0750
2930/2930 — Epoch 27/75	35	8/Ius/step	_	LOSS:	100/0/3.8/50
2930/2930 ————	35	869us/sten	_	1055	2046627 1250
Epoch 28/75	33	003и3/31ср			204002711250
2930/2930 ————	3s	868us/step	_	loss:	3323829.2500
Epoch 29/75					
2930/2930 ——————	3s	893us/step	-	loss:	1529230.2500
Epoch 30/75	_			_	
2930/2930 ————————————————————————————————————	2s	785us/step	-	loss:	1715761.3750
Epoch 31/75 2930/2930 ————————————————————————————————————	20	977us /stop		10001	2250266 5000
Epoch 32/75	25	6//us/step	_	1055.	2230300.3000
2930/2930 ————	2s	826us/step	_	loss:	3290078.0000
Epoch 33/75		ошоло, о тор			
2930/2930 ——————	3s	878us/step	_	loss:	1905504.1250
Epoch 34/75					
2930/2930 —————	3s	876us/step	-	loss:	3183046.0000
Epoch 35/75	_	075 / 1			2607047 2500
2930/2930 ————————————————————————————————————	35	8/5us/step	_	loss:	260/01/.2500
Epoch 36/75 2930/2930 ————————————————————————————————————	35	862us/sten	_	1055.	5042782 - 5000
Epoch 37/75	33	002и3/ 3 сер			304270213000
2930/2930 —————	2s	842us/step	_	loss:	3675449.7500
Epoch 38/75		-			
2930/2930 —————	3s	854us/step	-	loss:	1912870.1250
Epoch 39/75	_			-	
2930/2930 ————————————————————————————————————	3s	8/2us/step	-	loss:	3299108.0000
Epoch 40/75 2930/2930 ————————————————————————————————————	26	837us/stan	_	1000	3175000 2500
Epoch 41/75	23	03/u3/31cp		1033.	317399012300
2930/2930 ————	3s	878us/step	_	loss:	3172462.0000
Epoch 42/75		, , , , ,			
2930/2930 ——————	3s	871us/step	-	loss:	2621604.2500
Epoch 43/75					
2930/2930 —————	3s	874us/step	-	loss:	6477881.0000
Epoch 44/75	2-	07/110/0405		1000:	2070750 2500
2930/2930 — Epoch 45/75	55	o/4uS/STep	_	LUSS:	20/9/30.2300
2930/2930 ————	35	854us/sten	_	10551	5507510.0000
Epoch 46/75	J J	33 .43/ 3 ccp			550,51010000
2930/2930 ————	2s	765us/step	_	loss:	3141784.2500

Frank 47/75					
Epoch 47/75 2930/2930 ————————————————————————————————————	20	970us /stop		10001	5200020 5000
Epoch 48/75	25	6/9us/step	_	1055.	229902012000
2930/2930 ————	2s	832us/step	_	loss:	2574479.0000
Epoch 49/75					
2930/2930 ——————	2s	827us/step	-	loss:	5594116.0000
Epoch 50/75					
2930/2930 —————	3s	868us/step	-	loss:	2203035.7500
Epoch 51/75	2-	000/		1	(102500 0000
2930/2930 — Epoch 52/75	35	888us/step	_	loss:	6182508.0000
2930/2930 ————	35	846us/sten	_	1055	1126883 - 6250
Epoch 53/75	33	040и3/31ср			112000310230
2930/2930 ————	3s	847us/step	_	loss:	1887585.2500
Epoch 54/75					
2930/2930 —————	2s	704us/step	-	loss:	5559023.0000
Epoch 55/75	_			_	
2930/2930 —————	2s	845us/step	-	loss:	4676431.5000
Epoch 56/75 2930/2930 ————————————————————————————————————	26	932us /stop		10001	1167160 2500
Epoch 57/75	25	632us/step	_	1055.	110/100.2500
2930/2930 ————	3s	847us/step	_	loss:	2578578.5000
Epoch 58/75		о то до до до до до			
2930/2930 —————	3s	854us/step	_	loss:	4632709.0000
Epoch 59/75					
2930/2930 —————	3s	872us/step	-	loss:	2279798.7500
Epoch 60/75	_	067 / 1			2270767 2500
2930/2930 ————————————————————————————————————	35	86/us/step	_	loss:	32/8/6/.2500
Epoch 61/75 2930/2930 ————————————————————————————————————	35	875us/sten	_	1055.	3777461 . 0000
Epoch 62/75	33	07543/3 сер			377740110000
2930/2930 —————	2s	846us/step	_	loss:	2382801.0000
Epoch 63/75					
2930/2930 —————	3s	876us/step	-	loss:	3869962.5000
Epoch 64/75	_			-	
2930/2930 ————————————————————————————————————	2s	83/us/step	-	loss:	3896183.0000
Epoch 65/75 2930/2930 ————————————————————————————————————	3¢	270us/sten	_	1000	303/515 0000
Epoch 66/75	23	0/0u3/31cp		1033.	303431310000
2930/2930 ————	3s	873us/step	_	loss:	3365758.7500
Epoch 67/75		, , , , ,			
2930/2930 ——————	3s	873us/step	-	loss:	3993832.7500
Epoch 68/75					
2930/2930 —————	2s	827us/step	-	loss:	1726909.3750
Epoch 69/75	2-	075uc/c+o-		1000	7220040 0000
2930/2930 — Epoch 70/75	35	o/bus/step	_	LUSS:	1229040.0000
2930/2930 ————	35	850us/sten	_	loss:	7297883.0000
Epoch 71/75		ээсиз, эсср			. 25, 33310000
2930/2930 —————	3s	876us/step	_	loss:	3482087.5000
		•			

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2930/2930 -
                      3s 858us/step - loss: 3416111.2500
Epoch 2/75
2930/2930 -
                         2s 845us/step - loss: 1062443.6250
Epoch 3/75
2930/2930 -
                          --- 3s 854us/step - loss: 1061403.1250
Epoch 4/75
2930/2930 -
                            — 3s 860us/step - loss: 1050327.6250
Epoch 5/75
2930/2930 -
                            - 3s 864us/step - loss: 1024885.3125
Epoch 6/75
2930/2930 -
                           —— 3s 858us/step – loss: 1162125.1250
Epoch 7/75
                         3s 879us/step - loss: 1012541.4375
2930/2930 -
Epoch 8/75
2930/2930 -
                            — 2s 829us/step - loss: 1140197.8750
Epoch 9/75
                            - 3s 867us/step - loss: 1052508.6250
2930/2930 -
Epoch 10/75
2930/2930 -
                            - 3s 899us/step - loss: 1067544.5000
Epoch 11/75
2930/2930 -
                             - 2s 805us/step - loss: 1059041.3750
Epoch 12/75
2930/2930 -
                            — 2s 697us/step - loss: 1035761.3750
Epoch 13/75
                          3s 890us/step - loss: 1012921.3125
2930/2930 -
Epoch 14/75
2930/2930 -
                            - 2s 846us/step - loss: 1048938.7500
Epoch 15/75
2930/2930 -
                         2s 825us/step - loss: 1107681.8750
Epoch 16/75
```

- 2s 689us/step - loss: 1020924.7500

2930/2930 -

Enach 17/75					
Epoch 17/75 2930/2930 ————————————————————————————————————	25	838us/sten	_	1055	970880 3125
Epoch 18/75		030и3/ 3 сер			37000013123
2930/2930 —————	2s	803us/step	_	loss:	1116758.3750
Epoch 19/75					
2930/2930 ——————	3s	871us/step	-	loss:	1038465.3750
Epoch 20/75					
2930/2930 ————	2s	834us/step	-	loss:	1030651.5625
Epoch 21/75	2-	0.46		1	060457 0000
2930/2930 — Epoch 22/75	25	846us/step	_	toss:	909457.0000
2930/2930 ————	35	850us/sten	_	loss:	1020164.2500
Epoch 23/75		озоиз, этер			102010112300
2930/2930 —————	3s	847us/step	_	loss:	962014.1875
Epoch 24/75					
2930/2930 —————	3s	881us/step	-	loss:	1096054.2500
Epoch 25/75	_			_	
2930/2930 ————————————————————————————————————	2s	835us/step	-	loss:	1065065.5000
Epoch 26/75 2930/2930 ————————————————————————————————————	3 c	855us/stan	_	1000	071370 5000
Epoch 27/75	J 3	033u3/31cp		1033.	9/13/0.3000
2930/2930 ————	2s	807us/step	_	loss:	1030150.8750
Epoch 28/75		-			
2930/2930 —————	3s	859us/step	-	loss:	986174.6250
Epoch 29/75					
2930/2930 ————	2s	821us/step	-	loss:	1026004.7500
Epoch 30/75 2930/2930 ————————————————————————————————————	2.	00746/6+00		10001	1022502 1250
Epoch 31/75	35	90/us/step	_	toss:	1022583.1250
2930/2930 ————	35	865us/sten	_	loss:	1010647.3125
Epoch 32/75		оозиз, этор			101001713123
2930/2930 —————	2s	846us/step	_	loss:	1085794.7500
Epoch 33/75					
2930/2930 —————	3s	877us/step	-	loss:	1004713.1875
Epoch 34/75	2 -	070 / - t		1	1051244 6250
2930/2930 — Epoch 35/75	35	8/9us/step	_	loss:	1051244.0250
2930/2930 ————	25	824us/sten	_	loss:	977558-6875
Epoch 36/75		02 1d3, 3 ccp			37733010073
2930/2930 —————	2s	682us/step	_	loss:	971640.7500
Epoch 37/75					
2930/2930 —————	3s	861us/step	-	loss:	1011965.3125
Epoch 38/75	_	0.40		-	1110566 5000
2930/2930 ————————————————————————————————————	25	840us/step	_	LOSS:	1118200.2000
Epoch 39/75 2930/2930 ————————————————————————————————————	25	838115/5+00	_	10661	936789 2500
Epoch 40/75	23	υσομά <i>γ</i> α τ ε ρ		.033.	33070312300
2930/2930 ————	3s	854us/step	_	loss:	968151.3750
Epoch 41/75					
2930/2930 —————	2s	827us/step	-	loss:	941053.9375

Enoch 42/75					
Epoch 42/75 2930/2930 ————————————————————————————————————	25	844us/sten	_	1055	1023336, 1875
Epoch 43/75		044и3/ 3 сер			102333011073
2930/2930 —————	2s	730us/step	_	loss:	1123672.8750
Epoch 44/75					
2930/2930 ——————	3s	877us/step	_	loss:	933873.1875
Epoch 45/75					
2930/2930 —	3s	859us/step	-	loss:	1060670.5000
Epoch 46/75 2930/2930 ————————————————————————————————————	2-	055/24.22		1	1050506 5000
Epoch 47/75	38	oppus/step	_	1055:	1020290.2000
2930/2930 ————	3s	882us/sten	_	loss:	947238.0625
Epoch 48/75		00243, 510p			31723010023
2930/2930 —————	2s	750us/step	_	loss:	1018445.8125
Epoch 49/75					
2930/2930 —————	3s	886us/step	_	loss:	1010625.5625
Epoch 50/75	_			_	
2930/2930 ————————————————————————————————————	2s	/50us/step	_	loss:	1036924.0000
Epoch 51/75 2930/2930 ————————————————————————————————————	3¢	8/Qus/sten		1000	000501 2500
Epoch 52/75	J 3	049и3/31Ср			99950112500
2930/2930 ————	3s	854us/step	_	loss:	989157.9375
Epoch 53/75					
2930/2930 —————	3s	875us/step	_	loss:	1076083.7500
Epoch 54/75				_	
2930/2930 ————	3s	861us/step	_	loss:	990006.0625
Epoch 55/75 2930/2930 ————————————————————————————————————	2.	07000/6400		10001	1051642 0000
Epoch 56/75	35	8/8us/step	_	toss:	1051043.0000
2930/2930 ————	35	886us/sten	_	loss:	974268.5625
Epoch 57/75		300us, 51cp			37.120013023
2930/2930 —————	3s	849us/step	_	loss:	961604.5625
Epoch 58/75					
2930/2930 —————	3s	865us/step	-	loss:	1097304.7500
Epoch 59/75	2 -	010/		1	1005364 5635
2930/2930 — Epoch 60/75	35	910us/step	_	loss:	1005304.5025
2930/2930 ————	25	700us/sten	_	loss:	1008879.8125
Epoch 61/75		, oous, seep			100007510125
2930/2930 —————	2s	846us/step	_	loss:	1017813.2500
Epoch 62/75					
2930/2930 —————	3s	852us/step	_	loss:	1003918.5000
Epoch 63/75	_			_	
2930/2930 ————————————————————————————————————	3S	8/2us/step	-	LOSS:	1031500.3125
Epoch 64/75 2930/2930 ————————————————————————————————————	25	701us/stan	_	10661	990074 5625
Epoch 65/75	23	, 3103/3 CEP .		.033.	33007413023
2930/2930 ————	2s	691us/step	_	loss:	1071560.0000
Epoch 66/75					
2930/2930 —————	3s	884us/step	_	loss:	1075497.5000

```
Epoch 67/75
2930/2930 -
                         ---- 3s 916us/step - loss: 963710.6250
Epoch 68/75
2930/2930 -
                           — 3s 897us/step - loss: 982942.5625
Epoch 69/75
                            - 3s 926us/step - loss: 978020.8125
2930/2930 -
Epoch 70/75
2930/2930 -
                            - 3s 976us/step - loss: 947521.1250
Epoch 71/75
2930/2930 -
                            - 3s 945us/step - loss: 1001000.8125
Epoch 72/75
2930/2930 -
                          3s 935us/step - loss: 975247.5000
Epoch 73/75
2930/2930 -
                          3s 899us/step - loss: 937466.3750
Epoch 74/75
2930/2930 -
                           —— 3s 889us/step – loss: 1020953.3750
Epoch 75/75
2930/2930 -
                          3s 929us/step - loss: 942762.6250
                        1s 768us/step
1465/1465 -
Epoch 1/75
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, $y = self._initialize(X, y)$

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
4s 894us/step - loss: 4095923.5000
2930/2930 ———
Epoch 2/75
                        3s 865us/step - loss: 5542432.5000
2930/2930 -
Epoch 3/75
2930/2930 -
                          2s 839us/step - loss: 6731889.5000
Epoch 4/75
2930/2930 -
                          — 3s 882us/step – loss: 2358303.2500
Epoch 5/75
                          3s 872us/step - loss: 4282511.5000
2930/2930 -
Epoch 6/75
2930/2930 -
                            - 2s 840us/step - loss: 4976605.5000
Epoch 7/75
2930/2930 -
                           - 3s 859us/step - loss: 1993413.3750
Epoch 8/75
                         2s 836us/step - loss: 5665896.0000
2930/2930 -
Epoch 9/75
2930/2930 -
                           - 2s 845us/step - loss: 3876637.5000
Epoch 10/75
2930/2930 -
                         2s 837us/step - loss: 2254677.0000
Epoch 11/75
2930/2930 -
                            - 2s 833us/step - loss: 2409321.0000
```

For all 10/75	
Epoch 12/75	3s 865us/step - loss: 1550483.1250
Epoch 13/75	35 805us/step - toss: 1550485.1250
	3s 853us/step - loss: 2917986.5000
Epoch 14/75	22 000 aug, 5 top 1000 1 2017 500 1000
	3s 863us/step - loss: 2470027.0000
Epoch 15/75	
2930/2930 —————	3s 860us/step - loss: 2651805.5000
Epoch 16/75	
	3s 881us/step - loss: 2731574.5000
Epoch 17/75	
	3s 859us/step - loss: 1300679.1250
Epoch 18/75	2 040 / 1 1 6042402 0000
	3s 910us/step - loss: 6812182.0000
Epoch 19/75	3s 902us/step - loss: 4292089.5000
Epoch 20/75	35 90205/Step - toss. 4292009.3000
	3s 1ms/step - loss: 2111648.2500
Epoch 21/75	23 Ims, 5 ccp
2930/2930 ————	3s 865us/step - loss: 3772181.7500
Epoch 22/75	·
2930/2930 —————	3s 880us/step - loss: 3016789.7500
Epoch 23/75	
	3s 876us/step - loss: 2441478.5000
Epoch 24/75	
	3s 868us/step - loss: 1590378.8750
Epoch 25/75	3s 865us/step - loss: 2621674.0000
Epoch 26/75	35 805us/step - toss: 20210/4.0000
	3s 913us/step - loss: 4016316.2500
Epoch 27/75	33 313u3/3tep (0331 401031012300
· ·	3s 848us/step - loss: 3485291.5000
Epoch 28/75	·
2930/2930 —————	3s 880us/step - loss: 1159062.5000
Epoch 29/75	
	3s 854us/step - loss: 1850244.1250
Epoch 30/75	2 005 / 1 2004000 7500
	3s 985us/step - loss: 3834306.7500
Epoch 31/75	3s 960us/step - loss: 6881945.0000
Epoch 32/75	35 900us/step - toss: 0881945.0000
•	3s 1ms/step - loss: 5548029.5000
Epoch 33/75	23 1m3, 3 ccp
	3s 930us/step - loss: 3338538.0000
Epoch 34/75	
	3s 852us/step - loss: 4127940.5000
Epoch 35/75	
	2s 842us/step - loss: 2251970.2500
Epoch 36/75	
2930/2930 —————	2s 817us/step - loss: 3012675.5000

Epoch 37/75	
	2s 827us/step - loss: 2273508.7500
Epoch 38/75	25 02743, 300
	3s 851us/step - loss: 3535654.5000
Epoch 39/75	, , , , , , , , , , , , , , , , , , ,
	3s 876us/step - loss: 1535201.8750
Epoch 40/75	
	3s 851us/step - loss: 3149422.2500
Epoch 41/75	·
2930/2930 ————	3s 851us/step - loss: 2717195.0000
Epoch 42/75	
2930/2930 —————	2s 823us/step - loss: 8631508.0000
Epoch 43/75	
	3s 864us/step - loss: 1825484.1250
Epoch 44/75	
	3s 873us/step - loss: 1559550.8750
Epoch 45/75	
	3s 918us/step - loss: 3306129.5000
Epoch 46/75	3s 887us/step - loss: 9035654.0000
Epoch 47/75	35 887us/step - toss: 9033034.0000
	3s 898us/step - loss: 2192773.2500
Epoch 48/75	33 03003/31Cp 1033. 2132/73.2300
	3s 878us/step - loss: 6125595.0000
Epoch 49/75	10001 01200010000
	3s 859us/step - loss: 1155509.0000
Epoch 50/75	·
2930/2930 ——————	2s 799us/step - loss: 3075012.5000
Epoch 51/75	
	2s 828us/step - loss: 2173589.5000
Epoch 52/75	
	3s 902us/step - loss: 5581644.5000
Epoch 53/75	3s 857us/step - loss: 5711967.5000
Epoch 54/75	35 85/US/Step - toss: 5/1190/.5000
•	3s 888us/step - loss: 1627719.7500
Epoch 55/75	33 00003/3tep - t033. 102//19://300
	3s 994us/step - loss: 5838803.0000
Epoch 56/75	22 33 143, 3 139
	3s 1ms/step - loss: 2530832.5000
Epoch 57/75	•
2930/2930 ——————	3s 954us/step - loss: 1207973.5000
Epoch 58/75	
	3s 1ms/step - loss: 8144967.0000
Epoch 59/75	
	3s 896us/step - loss: 2487909.5000
Epoch 60/75	
2930/2930 —————	3s 911us/step - loss: 6109418.5000
E l. C4 /7E	
Epoch 61/75	3s 933us/step - loss: 2777821.0000

```
Epoch 62/75
2930/2930 -
                        3s 924us/step - loss: 4006349.7500
Epoch 63/75
2930/2930 -
                           — 3s 1ms/step - loss: 5636578.0000
Epoch 64/75
                            - 3s 1ms/step - loss: 3702516.2500
2930/2930 -
Epoch 65/75
2930/2930 -
                            - 3s 876us/step - loss: 2252055.5000
Epoch 66/75
2930/2930 -
                            - 3s 889us/step - loss: 1472082.2500
Epoch 67/75
2930/2930 -
                          3s 940us/step - loss: 7295114.0000
Epoch 68/75
2930/2930 -
                           3s 962us/step - loss: 2856325.2500
Epoch 69/75
2930/2930 -
                           — 3s 882us/step - loss: 7579291.0000
Epoch 70/75
2930/2930 -
                          3s 928us/step - loss: 10475897.0000
Epoch 71/75
2930/2930 -
                            — 3s 889us/step - loss: 6997036.5000
Epoch 72/75
2930/2930 -
                          3s 886us/step - loss: 4652399.0000
Epoch 73/75
2930/2930 -
                         3s 919us/step - loss: 4660802.0000
Epoch 74/75
2930/2930 -
                        3s 870us/step - loss: 6241032.0000
Epoch 75/75
2930/2930 -
                  3s 926us/step - loss: 2336244.5000
1s 757us/step
1465/1465 -
Epoch 1/100
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

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super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
1465/1465 —
                         2s 835us/step - loss: 7454884.5000
Epoch 2/100
1465/1465 -
                          —— 1s 782us/step - loss: 3329235.5000
Epoch 3/100
1465/1465 -
                         1s 736us/step - loss: 2993264.7500
Epoch 4/100
1465/1465 -
                            - 1s 776us/step - loss: 1822207.0000
Epoch 5/100
1465/1465 -
                         1s 777us/step - loss: 2764950.0000
Epoch 6/100
1465/1465 -
                            - 1s 810us/step - loss: 2694545.5000
```

Frank 7/100				
Epoch 7/100 1465/1465 ————————————————————————————————————	1 c	775us/sten -	1000	37583/18 75/00
Epoch 8/100	13	//Jus/step =	1033.	373034017300
1465/1465 ————	1s	777us/step -	loss:	6194858.5000
Epoch 9/100	_	, , , , , , , , , , , , , , , , , , , ,		
1465/1465	1 s	772us/step -	loss:	1639599.7500
Epoch 10/100		•		
1465/1465 ——————	1 s	739us/step -	loss:	3344018.7500
Epoch 11/100				
1465/1465 —————	1 s	771us/step -	loss:	3554935.7500
Epoch 12/100	_		_	
1465/1465	1 s	781us/step -	loss:	3514879.5000
Epoch 13/100	1 -	775 / - +	1	2500406 2500
1465/1465 ————————————————————————————————————	IS	//Sus/step -	loss:	3509486.2500
Epoch 14/100 1465/1465 ————————————————————————————————————	1 c	777us/sten -	1000	2501652 2500
Epoch 15/100	13	///us/step =	1055.	230103212300
1465/1465 ————	1s	779us/sten -	loss:	1500312.3750
Epoch 16/100		7734373166		130031213730
1465/1465 —————	1s	766us/step -	loss:	1432826.5000
Epoch 17/100		·		
1465/1465 ——————	1 s	777us/step -	loss:	4479460.0000
Epoch 18/100				
1465/1465 —————	1 s	758us/step -	loss:	5352497.0000
Epoch 19/100	_		_	
1465/1465	1 s	743us/step –	loss:	3850929.5000
Epoch 20/100	1.	704/a+an	1	2227650 7500
1465/1465 — Epoch 21/100	15	/84us/step -	toss:	223/038./300
1465/1465 ————	1 c	773us/sten -	lossi	4056082 2500
Epoch 22/100	13	7730373100		403000212300
1465/1465	1s	779us/step -	loss:	2452021.2500
Epoch 23/100		,		
1465/1465	1 s	770us/step -	loss:	2680650.5000
Epoch 24/100				
1465/1465 —————	1 s	762us/step -	loss:	5896689.0000
Epoch 25/100	_		_	
1465/1465	1s	/68us/step -	loss:	40//229.5000
Epoch 26/100	1.	011/a+an	1	1000727 2500
1465/1465 — Epoch 27/100	15	811us/step –	toss:	1900/3/.2500
1465/1465 —————	1 c	76/us/sten -	1000	1001553 7500
Epoch 28/100	13	704и3/31Ср	(033.	190155517500
1465/1465 ————	1s	761us/step -	loss:	2534120.5000
Epoch 29/100	_			
1465/1465 —————	1 s	770us/step -	loss:	4401467.5000
Epoch 30/100				
1465/1465 —————	1 s	773us/step -	loss:	1447426.2500
Epoch 31/100			_	
1465/1465 —————	1 s	759us/step –	loss:	3983191 . 7500

E 22/400	
Epoch 32/100	1s 761us/step - loss: 4805034.5000
Epoch 33/100	15 /01us/step - toss. 4003034.3000
	1s 758us/step - loss: 3377846.2500
Epoch 34/100	
1465/1465	1s 760us/step - loss: 1955281.7500
Epoch 35/100	
	1s 757us/step - loss: 1927311.0000
Epoch 36/100	7.744 / 1 7.7404642 0000
	1s 741us/step - loss: 7101612.0000
Epoch 37/100	1s 755us/step - loss: 2517459.7500
Epoch 38/100	13 /33u3/3tcp to33: 231/439:/300
	1s 751us/step - loss: 2504307.2500
Epoch 39/100	
1465/1465 ————————	1s 763us/step - loss: 2580050.2500
Epoch 40/100	
	1s 764us/step - loss: 1955823.1250
Epoch 41/100	1s 773us/step - loss: 4860224.0000
Epoch 42/100	15 //3us/step - loss: 4860224.0000
	1s 770us/step - loss: 2564813.7500
Epoch 43/100	23 // ods/ scep
	1s 784us/step - loss: 2220672.5000
Epoch 44/100	
	1s 818us/step - loss: 4365873.0000
Epoch 45/100	
	1s 820us/step - loss: 4793539.5000
Epoch 46/100	1s 770us/step - loss: 4715223.5000
Epoch 47/100	15 //wus/step - toss: 4/13223:3000
•	1s 696us/step - loss: 3202123.7500
Epoch 48/100	
1465/1465	1s 726us/step - loss: 9103731.0000
Epoch 49/100	
	1s 772us/step - loss: 1506666.8750
Epoch 50/100	1- 700 - /ston local 4472425 5000
Epoch 51/100	1s 798us/step - loss: 4472435.5000
	1s 765us/step - loss: 5563414.5000
Epoch 52/100	23 /03d3/3tcp
•	1s 705us/step - loss: 3280188.5000
Epoch 53/100	
	1s 713us/step - loss: 7879761.0000
Epoch 54/100	
	1s 794us/step - loss: 1381650.5000
Epoch 55/100	1s 868us/step - loss: 2859943.2500
Epoch 56/100	15 000us/step - tuss: 2009943.2000
	1s 775us/step - loss: 2426501.0000
	25 . / 343/ 3 Cop (033) 242030110000

Epoch 57/100	
	1s 786us/step - loss: 8770813.0000
Epoch 58/100	13 700d3/3tcp t033: 0770013:0000
	1s 801us/step - loss: 3278375.2500
Epoch 59/100	
	1s 805us/step - loss: 4540049.5000
Epoch 60/100	·
1465/1465 ————————————————————————————————————	1s 815us/step - loss: 2142050.7500
Epoch 61/100	
	1s 812us/step - loss: 3829436.5000
Epoch 62/100	
	1s 792us/step - loss: 3527512.2500
Epoch 63/100	1- 027/
	1s 827us/step - loss: 7849244.0000
Epoch 64/100	1s 800us/step - loss: 3041350.7500
Epoch 65/100	13 00003/31cp - 1033. 3041330://300
	1s 736us/step - loss: 3076392.7500
Epoch 66/100	22 ,5500,5500
	1s 768us/step - loss: 5675838.5000
Epoch 67/100	
1465/1465 ——————	1s 754us/step - loss: 1559001.3750
Epoch 68/100	
	1s 744us/step - loss: 6422178.5000
Epoch 69/100	1- 047/
Epoch 70/100	1s 847us/step - loss: 1630559.6250
1465/1465	1s 805us/step - loss: 5606133.0000
Epoch 71/100	23 003u3/3 tep 10331 300013310000
•	1s 785us/step - loss: 2452568.5000
Epoch 72/100	·
	1s 813us/step - loss: 2928204.5000
Epoch 73/100	
	1s 759us/step - loss: 3573626.7500
Epoch 74/100	1- 704:: / - 1 2252212 5000
Epoch 75/100	1s 784us/step - loss: 2352212.5000
	1s 777us/step - loss: 4852060.0000
Epoch 76/100	
	1s 784us/step - loss: 2746089.5000
Epoch 77/100	
1465/1465 ——————	1s 787us/step - loss: 2142579.0000
Epoch 78/100	
	1s 827us/step - loss: 6209775.0000
Epoch 79/100	1- 774/
	1s 771us/step - loss: 7739117.5000
Epoch 80/100	1s 893us/step - loss: 2187661.2500
Epoch 81/100	13 033u5/Step - 1055: 210/001.2300
	1s 914us/step - loss: 5160553.0000
= 199/ ±709	25 31403/3 CCP (033) 310033310000

```
Epoch 82/100
1465/1465
                            — 1s 783us/step - loss: 2231848.5000
Epoch 83/100
                               - 1s 783us/step - loss: 3099502.0000
1465/1465 -
Epoch 84/100
                               - 1s 831us/step - loss: 2614522.0000
1465/1465 -
Epoch 85/100
1465/1465 -
                               - 1s 798us/step - loss: 4962034.5000
Epoch 86/100
1465/1465 -
                               • 1s 775us/step - loss: 4669749.0000
Epoch 87/100
1465/1465 -
                              - 1s 780us/step - loss: 2061676.8750
Epoch 88/100
1465/1465 -
                              - 1s 767us/step - loss: 2330813.7500
Epoch 89/100
1465/1465 -
                              - 1s 851us/step - loss: 3750241.2500
Epoch 90/100
1465/1465 -
                              - 1s 845us/step - loss: 4128178.7500
Epoch 91/100
1465/1465 -
                              - 1s 913us/step - loss: 3831752.0000
Epoch 92/100
1465/1465 -
                              - 1s 928us/step - loss: 6981539.5000
Epoch 93/100
1465/1465 -
                              - 1s 876us/step - loss: 2829737.5000
Epoch 94/100
1465/1465 -
                              - 1s 861us/step - loss: 4886932.5000
Epoch 95/100
1465/1465 -
                              - 1s 954us/step - loss: 3566306.2500
Epoch 96/100
1465/1465 -
                               • 1s 832us/step - loss: 2310467.0000
Epoch 97/100
1465/1465 -
                              - 1s 797us/step - loss: 3801882.0000
Epoch 98/100
1465/1465 -
                              - 1s 757us/step - loss: 2844650.7500
Epoch 99/100
1465/1465 -
                              - 1s 742us/step - loss: 1412777.6250
Epoch 100/100
1465/1465 —
                              - 1s 710us/step - loss: 5640935.0000
733/733 —
                            - 1s 743us/step
Epoch 1/100
```

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWarning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

1465/1465 — **2s** 709us/step – loss: 5693706.5000

Fr 2 /100						
Epoch 2/100 1465/1465 ————————————————————————————————————	1 c 71	Auc/cton		1000	110061	15 2750
Epoch 3/100	15 /1	4us/ step	_	1055.	11900.	1313730
1465/1465 ————————————————————————————————————	1s 73	5us/step	_	loss:	107147	73.2500
Epoch 4/100						
1465/1465	1s 71	1us/step	_	loss:	105015	50.5000
Epoch 5/100						
1465/1465 ————————————————————————————————————	1s 70	5us/step	-	loss:	109962	29.0000
Epoch 6/100	1 - 01	C / - t		1	10000	
1465/1465 — Epoch 7/100	12 81	ous/step	_	loss:	10988.	10.8/50
1465/1465 —————	1s 81	lus/sten	_	lossi	105384	15.7500
Epoch 8/100	13 01	тиз/ э сер			10330-	7317300
1465/1465 ————————————————————————————————————	1s 71	6us/step	_	loss:	106464	14.6250
Epoch 9/100						
1465/1465 ———————	1s 71	2us/step	_	loss:	114896	64.0000
Epoch 10/100						
1465/1465 —	1s 73	3us/step	-	loss:	103478	38 . 4375
Epoch 11/100 1465/1465 ————————————————————————————————————	1. 72	0/s+on		10001	1150/3	02 0750
Epoch 12/100	15 /2	9us/step	_	1055:	115643	03.0/30
1465/1465 —————	1s 73	1us/sten	_	loss:	100504	14.2500
Epoch 13/100		, op				
1465/1465 ——————	1s 71	0us/step	_	loss:	104329	97.4375
Epoch 14/100						
1465/1465 ———————	1s 74	2us/step	-	loss:	101785	51.4375
Epoch 15/100				-		
1465/1465 ————————————————————————————————————	1s /3	/us/step	_	loss:	125326	5.2500
Epoch 16/100 1465/1465 ————————————————————————————————————	1 c 72	Buc/stan		1000	106225	51 0000
Epoch 17/100	13 /2	Jus/ step			100223	71.0000
1465/1465 —————	1s 71	0us/step	_	loss:	106600	02.6250
Epoch 18/100		·				
1465/1465 ———————	1s 69	5us/step	_	loss:	104669	91.5625
Epoch 19/100				_		
1465/1465 ————————————————————————————————————	1s 70	6us/step	_	loss:	110915	8.8750
Epoch 20/100 1465/1465 ————————————————————————————————————	16 72	Auc/ston		1000	105/11	24 0000
Epoch 21/100	15 /2	ous/step	_	1055.	103410	94.0000
1465/1465 —————	1s 69	3us/step	_	loss:	100682	21.8750
Epoch 22/100		,				
1465/1465	1s 71	5us/step	_	loss:	106513	L8.2500
Epoch 23/100						
1465/1465 ————————————————————————————————————	1s 69	6us/step	-	loss:	106437	76.3750
Epoch 24/100	1- 00	2a / = ± =		1	105070	00 1250
1465/1465 ————————————————————————————————————	T2 09	∠us/step	_	LOSS:	T020\8	30.1250
Epoch 25/100 1465/1465 ————————————————————————————————————	1s 67	Bus/sten	_	1055.	101343	79 5625
Epoch 26/100	- 3 0/	σασ <i>,</i> στορ		.0331	101547	3.3023
1465/1465 ————————————————————————————————————	1s 70	9us/step	_	loss:	101523	33.1875
•	_					

Epoch 27/100					
1465/1465 —————	1ς	714us/sten -		lnss:	983055.5000
Epoch 28/100	13	71403/3CCP			30303313000
1465/1465 —————	1 s	684us/step -	- 1	loss:	1075412.2500
Epoch 29/100		-			
1465/1465 ———————	1 s	701us/step -	- 1	loss:	1039235.3750
Epoch 30/100					
1465/1465 ————————————————————————————————————	1 s	667us/step -	-]	loss:	1028434.1875
Epoch 31/100	1 -	C00		1	1000000 2750
1465/1465 — Epoch 32/100	IS	688us/step -	-	loss:	1008992.3750
1465/1465 —————	1 c	602us/sten -		lnee:	1013110 7500
Epoch 33/100	13	032u3/3tcp			101311017300
1465/1465 ————————————————————————————————————	1s	677us/step -		loss:	1022136.6250
Epoch 34/100		, ,			
1465/1465 ———————	1 s	687us/step -	- 1	loss:	977887.5625
Epoch 35/100					
1465/1465 ————————————————————————————————————	1 s	690us/step -		loss:	1019399.8125
Epoch 36/100	1.	C00 / = + = =	-	1	004010 0025
1465/1465 — Epoch 37/100	IS	698us/step -	-	loss:	984010.0625
1465/1465 ————————————————————————————————————	1 c	700us/sten -		lnee:	083506 0625
Epoch 38/100	13	703u3/3ccp			90330010023
1465/1465 ————————————————————————————————————	1s	681us/step -	_ 1	loss:	965825.5625
Epoch 39/100					
1465/1465 ——————	1 s	688us/step -		loss:	1060834.5000
Epoch 40/100					
1465/1465 —	1 s	723us/step -	-]	loss:	1067366.3750
Epoch 41/100 1465/1465 ————————————————————————————————————	1.	60000/stop			060512 0750
Epoch 42/100	15	oggus/step -		1055;	909312.8730
1465/1465 —	1s	694us/sten -		loss:	1033277.9375
Epoch 43/100		03 .u3, 3 cop			103327713373
1465/1465 ———————	1 s	709us/step -	- 1	loss:	1014342.7500
Epoch 44/100					
1465/1465 ———————	1 s	708us/step -	- 1	loss:	1035546.7500
Epoch 45/100	_	607 / .	_		000450 5005
1465/1465 ————————————————————————————————————	1s	68/us/step -	-	loss:	996150.5625
Epoch 46/100 1465/1465 ————————————————————————————————————	1.	709us/sten -		locc:	1030033 3135
Epoch 47/100	13	/00us/step -		.055.	1030023.3123
1465/1465 ————————————————————————————————————	1s	702us/step -		loss:	1023112.1875
Epoch 48/100					
1465/1465 ——————	1 s	694us/step -	- 1	loss:	1176008.7500
Epoch 49/100					
1465/1465 —————————	1 s	678us/step -		loss:	1014311.6875
Epoch 50/100	_	704	_		4070004 0055
1465/1465 ————————————————————————————————————	1 s	/04us/step -	-]	loss:	10/2664.6250
Epoch 51/100 1465/1465 ————————————————————————————————————	1.	70206/6+05	-	locc:	1100000 5000
1405/1405	TZ	/wous/step -	-	1055	TTM0050*2MMM

Epoch 52/100	1s 685us/step - loss: 976652.3750
Epoch 53/100	13 003d3/step - t055: 9/0032:3/30
	1s 674us/step - loss: 972743.9375
Epoch 54/100	
	1s 683us/step - loss: 1057459.7500
Epoch 55/100	•
1465/1465 —————	1s 679us/step - loss: 1053782.1250
Epoch 56/100	
	1s 670us/step - loss: 1014892.3750
Epoch 57/100	
	1s 670us/step - loss: 1006741.6250
Epoch 58/100	1- 670/ 1 1127242 0000
	1s 679us/step - loss: 1137242.0000
Epoch 59/100	1s 683us/step - loss: 1016398.5625
Epoch 60/100	15 003u3/step - t035. 1010390:3023
	1s 681us/step - loss: 993534.7500
Epoch 61/100	25 00243, 510p 10331 33333 117300
1465/1465	1s 687us/step - loss: 1004556.2500
Epoch 62/100	·
	1s 685us/step - loss: 1055954.5000
Epoch 63/100	
	1s 675us/step - loss: 947542.9375
Epoch 64/100	
	1s 680us/step - loss: 1026992.0625
Epoch 65/100	1s 693us/step - loss: 1016444.1250
Epoch 66/100	15 093uS/Step - t0SS: 1010444.1230
	1s 708us/step - loss: 982365.3125
Epoch 67/100	10 / 00 do / 5 top 100 of 10
	1s 686us/step - loss: 1075503.7500
Epoch 68/100	·
	1s 675us/step - loss: 1037082.6250
Epoch 69/100	
	1s 677us/step - loss: 969282.1875
Epoch 70/100	1- 670/ 1 006220 0125
	1s 679us/step - loss: 986228.8125
Epoch 71/100	1s 665us/step - loss: 1035206.9375
Epoch 72/100	15 003u3/step - toss. 1033200.9373
•	1s 684us/step - loss: 1011737.0000
Epoch 73/100	
	1s 669us/step - loss: 1059354.7500
Epoch 74/100	
	1s 683us/step - loss: 1063292.6250
Epoch 75/100	
	1s 685us/step - loss: 1022403.8750
Epoch 76/100	1- (07.4-/-1 1 4020400 4075
1405/1405	1s 697us/step - loss: 1030109.1875

Epoch 77/100 1465/1465	1s 676us/step - loss: 1029813.5625
Epoch 78/100	23 07 0d3, 3 tep 10331 102301313023
	1s 683us/step - loss: 995281.3125
Epoch 79/100	
1465/1465 ———————	1s 680us/step - loss: 1043628.8750
Epoch 80/100	
1465/1465 ———————	1s 677us/step - loss: 1037391.3125
Epoch 81/100	
	1s 679us/step - loss: 1043030.0625
Epoch 82/100	
	1s 699us/step - loss: 987566.7500
Epoch 83/100	
	1s 680us/step - loss: 949444.3750
Epoch 84/100	1- ((()-/
	1s 666us/step - loss: 1079931.6250
Epoch 85/100	1s 673us/step - loss: 1038865.5000
Epoch 86/100	15 0/3ds/step - toss. 1030003.3000
1465/1465	1s 678us/step - loss: 1033163.1875
Epoch 87/100	23 070d37 3 tep 10331 103310311073
	1s 677us/step - loss: 1060702.7500
Epoch 88/100	, ,
1465/1465	1s 744us/step - loss: 1002829.1875
Epoch 89/100	
	1s 665us/step - loss: 1034991.3125
Epoch 90/100	
	1s 677us/step - loss: 1017605.8125
Epoch 91/100	
	1s 672us/step - loss: 1033985.4375
Epoch 92/100	1- 677/ 1 1016664 1075
	1s 677us/step - loss: 1016664.1875
Epoch 93/100	1s 673us/step - loss: 1020277.8750
Epoch 94/100	13 0/303/31cp - 1033. 10202/710/30
	1s 675us/step - loss: 1034954.2500
Epoch 95/100	23 073437 3 tep 10331 103133112300
	1s 692us/step - loss: 1018909.3750
Epoch 96/100	•
1465/1465	1s 727us/step - loss: 999490.9375
Epoch 97/100	
1465/1465 ——————	1s 682us/step - loss: 1099251.8750
Epoch 98/100	
	1s 661us/step - loss: 1113958.0000
Epoch 99/100	
	1s 678us/step - loss: 1047675.7500
Epoch 100/100	1- 000/ 1 004400 0050
733/733 — 19	1s 669us/step - loss: 981108.6250
733/733 — 19 Epoch 1/100	s /zwus/step
rhocu 1/100	

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super(). init (activity_regularizer=activity_regularizer, **kwargs)

super()init(activity	_regularizer=activity_regularizer, **kwarg
1465/1465 ——————	2s 681us/step - loss: 8818812.0000
Epoch 2/100	
1465/1465 —————	1s 665us/step - loss: 2416056.5000
Epoch 3/100	
	1s 666us/step - loss: 2871357.7500
Epoch 4/100	
	1s 665us/step - loss: 1459651.3750
Epoch 5/100	_
	1s 707us/step - loss: 4502774.5000
Epoch 6/100	4 662 / 1 2 2472662 7522
	1s 663us/step - loss: 2472669.7500
Epoch 7/100	1- (00/
	1s 680us/step - loss: 5599269.5000
Epoch 8/100	1s 672us/step - loss: 5563594.5000
Epoch 9/100	15 0/2us/step - toss. 3303394.3000
	1s 665us/step - loss: 4421969.5000
Epoch 10/100	13 003d3/3tep 1033: 442130313000
	1s 669us/step - loss: 5825823.5000
Epoch 11/100	
	1s 688us/step - loss: 3414390.5000
Epoch 12/100	
1465/1465	1s 692us/step - loss: 12110042.0000
Epoch 13/100	
1465/1465 ———————	1s 674us/step - loss: 3997618.0000
Epoch 14/100	
	1s 680us/step - loss: 2439850.2500
Epoch 15/100	_
	1s 673us/step - loss: 3170500.0000
Epoch 16/100	5 660 () 3 2052702 5000
	1s 669us/step - loss: 3952793.5000
Epoch 17/100	1c 675us/ston loss, 4150017 2500
1465/1465 ————————————————————————————————————	1s 675us/step - loss: 4158817.2500
•	1s 668us/step - loss: 1549725.3750
Epoch 19/100	13 000u3/step - t033: 1349/23:3/30
	1s 667us/step - loss: 5414755.5000
Epoch 20/100	25 007 d3/3 tep 10331 3414/3313000
·	1s 669us/step - loss: 4098823.5000
Epoch 21/100	
· ·	—— 1s 685us/step - loss: 3336372.2500
•	, , , , , , , , , , , , , , , , , , , ,

- 1 00/400	
Epoch 22/100	1s 711us/step - loss: 3875240.7500
Epoch 23/100	15 /11us/step - toss: 38/3240./300
	1s 668us/step - loss: 5669244.0000
Epoch 24/100	, , , , , , , , , , , , , , , , , , ,
1465/1465	1s 678us/step - loss: 3277970.7500
Epoch 25/100	
	1s 664us/step - loss: 2604447.0000
Epoch 26/100	1 670 / 1 2244052 2500
	1s 678us/step - loss: 3341053.2500
Epoch 27/100	1s 668us/step - loss: 1480865.1250
Epoch 28/100	13 00003/3tcp (033: 1400003:1230
	1s 667us/step - loss: 2095087.5000
Epoch 29/100	
1465/1465 ————————	1s 666us/step - loss: 6050485.0000
Epoch 30/100	
	1s 665us/step - loss: 4792549.0000
Epoch 31/100	1s 660us/step - loss: 4081279.5000
Epoch 32/100	15 6600us/step - loss: 40812/9.5000
	1s 681us/step - loss: 3599765.5000
Epoch 33/100	23 00103/3tep 10331 3337/0313000
	1s 694us/step - loss: 2216165.0000
Epoch 34/100	
	1s 718us/step - loss: 5057038.0000
Epoch 35/100	
	1s 708us/step - loss: 3107797.2500
Epoch 36/100	1s 667us/step - loss: 2119389.0000
Epoch 37/100	15 00/us/step - toss. 2119369.0000
	1s 669us/step - loss: 6497456.5000
Epoch 38/100	
1465/1465	1s 660us/step - loss: 3087223.5000
Epoch 39/100	
	1s 662us/step - loss: 4868526.0000
Epoch 40/100	1- (52/
Epoch 41/100	1s 652us/step - loss: 6710352.0000
	1s 670us/step - loss: 4201664.0000
Epoch 42/100	23 0700373tcp t033: 420100410000
•	1s 689us/step - loss: 2432004.2500
Epoch 43/100	·
	1s 661us/step - loss: 4040856.7500
Epoch 44/100	
	1s 659us/step - loss: 6282238.5000
Epoch 45/100	1c 664uc/cton local 2400266 2500
Epoch 46/100	1s 664us/step - loss: 3499366.2500
	1s 665us/step - loss: 3888473.7500
1703/ 1703 ·	23 30343/31Cp 10331 30004/31/300

Epoch 47/100	
	1s 656us/step - loss: 3094829.2500
Epoch 48/100	23 03003/3tep (033: 303402312300
	1s 665us/step - loss: 4147541.7500
Epoch 49/100	
	1s 669us/step - loss: 4135769.2500
Epoch 50/100	·
1465/1465 ————————	1s 668us/step - loss: 2640445.5000
Epoch 51/100	
	1s 680us/step - loss: 1567934.0000
Epoch 52/100	
	1s 702us/step - loss: 4805200.0000
Epoch 53/100	1- CCA (-t 1 40CCF04 F000
	1s 664us/step - loss: 4866501.5000
Epoch 54/100	1s 661us/step - loss: 3763627.5000
Epoch 55/100	13 001u3/3tep - t033. 3/0302/13000
	1s 662us/step - loss: 5404561.5000
Epoch 56/100	100000000000000000000000000000000000000
	1s 653us/step - loss: 3585012.7500
Epoch 57/100	·
1465/1465 ——————	1s 690us/step - loss: 1451486.2500
Epoch 58/100	
	1s 696us/step - loss: 1666725.1250
Epoch 59/100	1- 710/ 1 1762617 1250
Epoch 60/100	1s 719us/step - loss: 1763617.1250
	1s 711us/step - loss: 1224680.2500
Epoch 61/100	23 / 11u3/ 5 cep
	1s 739us/step - loss: 3555512.0000
Epoch 62/100	·
1465/1465 ——————	1s 734us/step - loss: 1739305.8750
Epoch 63/100	
	1s 725us/step - loss: 9015032.0000
Epoch 64/100	1- 727/ 1 2000402 0000
Epoch 65/100	1s 727us/step - loss: 2869492.0000
	1s 719us/step - loss: 5788112.5000
Epoch 66/100	25 / 1343/ Step (0331 3/0011213000
	1s 709us/step - loss: 1392731.5000
Epoch 67/100	
1465/1465 ———————	1s 745us/step - loss: 4174530.2500
Epoch 68/100	
	1s 738us/step - loss: 2520312.5000
Epoch 69/100	
	1s 734us/step - loss: 4092166.0000
Epoch 70/100	2c 1mc/cton loca: E4E4612 0000
	2s 1ms/step - loss: 5454612.0000
Epoch 71/100	2s 765us/step - loss: 3248594.2500
1403/1403	23 /0303/31Ep - 1055. 3240394.2300

Fr 12 /100	
Epoch 72/100	1s 718us/step - loss: 4003432.2500
Epoch 73/100	15 /1005/Step - toss. 4003432.2300
	1s 749us/step - loss: 8557074.0000
Epoch 74/100	
1465/1465	1s 697us/step - loss: 2080709.6250
Epoch 75/100	
	1s 712us/step - loss: 4376817.0000
Epoch 76/100	7 746 / 1 7 2440742 5000
	1s 716us/step - loss: 3110743.5000
Epoch 77/100	1s 745us/step - loss: 3844204.7500
Epoch 78/100	13 / +3u3/3 tcp to33: 304+204: / 300
	1s 700us/step - loss: 4543403.0000
Epoch 79/100	
1465/1465 ———————	1s 711us/step - loss: 3822268.5000
Epoch 80/100	
	1s 709us/step - loss: 3365036.5000
Epoch 81/100	1s 730us/step - loss: 3975109.5000
Epoch 82/100	15 /30us/step - loss: 39/5109.5000
	1s 701us/step - loss: 2089826.6250
Epoch 83/100	23 / 01u3 / 3 ccp
	1s 712us/step - loss: 1698282.6250
Epoch 84/100	
	1s 711us/step - loss: 2848041.7500
Epoch 85/100	
	1s 694us/step - loss: 4934523.5000
Epoch 86/100	1s 690us/step - loss: 3159895.7500
Epoch 87/100	15 09005/Step - toss. 3139893.7300
	1s 706us/step - loss: 1732699.6250
Epoch 88/100	
1465/1465 ——————	1s 699us/step - loss: 5232117.0000
Epoch 89/100	
	1s 717us/step - loss: 4316436.0000
Epoch 90/100	1- (00/
Epoch 91/100	1s 688us/step - loss: 2027242.6250
	1s 702us/step - loss: 1382889.5000
Epoch 92/100	13 / 02u3/3ccp
•	1s 689us/step - loss: 2997944.2500
Epoch 93/100	·
1465/1465 ——————	1s 734us/step - loss: 7316751.5000
Epoch 94/100	
	1s 692us/step - loss: 3828941.0000
Epoch 95/100	1e 602us/ston loss: 1252002 2002
Epoch 96/100	1s 683us/step - loss: 1252692.0000
	1s 696us/step - loss: 1828421.5000
1703/ 1703 ·	23 03003/31Cp 1033: 1020421:3000

/opt/anaconda3/lib/python3.11/site-packages/scikeras/wrappers.py:925: UserWa rning: ``build_fn`` will be renamed to ``model`` in a future release, at whi ch point use of ``build_fn`` will raise an Error instead.

X, y = self._initialize(X, y)

/opt/anaconda3/lib/python3.11/site-packages/keras/src/layers/core/dense.py:8 7: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a laye r. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.

super().__init__(activity_regularizer=activity_regularizer, **kwargs)

```
2198/2198 -
                       3s 733us/step - loss: 7634481.0000
Epoch 2/75
                          2s 745us/step - loss: 2224672.5000
2198/2198 -
Epoch 3/75
2198/2198 -
                           — 2s 745us/step - loss: 1183532.1250
Epoch 4/75
2198/2198 -
                            — 2s 738us/step - loss: 3757014.5000
Epoch 5/75
2198/2198 -
                             - 2s 751us/step - loss: 3143267.2500
Epoch 6/75
2198/2198 -
                            — 2s 764us/step - loss: 4974851.5000
Epoch 7/75
                          2s 752us/step - loss: 1053574.6250
2198/2198 -
Epoch 8/75
2198/2198 -
                             - 2s 734us/step - loss: 3162071.7500
Epoch 9/75
                            - 2s 743us/step - loss: 3192863.0000
2198/2198 -
Epoch 10/75
                            - 2s 734us/step - loss: 1453448.0000
2198/2198 -
Epoch 11/75
2198/2198 -
                             - 2s 758us/step - loss: 4727388.0000
Epoch 12/75
2198/2198 -
                             - 2s 734us/step - loss: 1635826.1250
Epoch 13/75
                           2s 725us/step - loss: 2100077.2500
2198/2198 -
Epoch 14/75
2198/2198 -
                             - 2s 749us/step - loss: 3123514.7500
Epoch 15/75
2198/2198 -
                           2s 742us/step - loss: 3144285.5000
Epoch 16/75
```

- 2s 746us/step - loss: 2643972.7500

2198/2198 -

Epoch 17/75					
2198/2198 ————	25	7//us/sten -	_	1000	1771780 8750
Epoch 18/75	23	744u3/3tcp			177170010750
2198/2198 ————	2s	733us/step -	_	loss:	3801474.0000
Epoch 19/75	_	, , , , , , , , , , , , , , , , , , ,			
2198/2198 —————	2s	728us/step -	-	loss:	1868380.8750
Epoch 20/75					
2198/2198 ——————	2s	744us/step -	-	loss:	3971902.0000
Epoch 21/75					
2198/2198 —————	2s	737us/step -	-	loss:	1787419.5000
Epoch 22/75	_	7.10		-	2024202 0000
2198/2198 ————————————————————————————————————	2s	/40us/step -	-	loss:	3034302.0000
Epoch 23/75 2198/2198 ————————————————————————————————————	2.	720us /s+on		10001	1104202 7500
Epoch 24/75	25	/30us/step -	-	1055:	1104203.7300
2198/2198 ————	25	743us/sten -	_	loss:	2589757.7500
Epoch 25/75		, 13d3, 3 top			230373717300
2198/2198 ————	2s	732us/step -	-	loss:	5089283.0000
Epoch 26/75					
2198/2198 ———————	2s	733us/step -	-	loss:	8637688.0000
Epoch 27/75					
2198/2198 —	2s	726us/step -	-	loss:	2776494.2500
Epoch 28/75	2-	720/atan		1	2274120 0000
2198/2198 — Epoch 29/75	25	/30us/step -	-	toss:	23/4138.0000
2198/2198 ————	25	739us/sten -	_	loss:	1749299.0000
Epoch 30/75		75545, 5166			17.1323310000
2198/2198 ——————	2s	734us/step -	-	loss:	5452863.0000
Epoch 31/75					
2198/2198 —————	2s	736us/step -	-	loss:	2274443.2500
Epoch 32/75	_	700 / .		-	2005446 5000
2198/2198 — Epoch 33/75	25	/28us/step -	-	loss:	2895416.5000
2198/2198 ————	25	723us/sten -	_	1055.	4402848 0000
Epoch 34/75	23	723u3/3tcp			440204010000
2198/2198 ————	2s	722us/step -	-	loss:	2890976.5000
Epoch 35/75					
2198/2198 —————	2s	752us/step -	-	loss:	2385071.5000
Epoch 36/75				_	
2198/2198 —	2s	795us/step -	-	loss:	3240501.2500
Epoch 37/75	2-	705/2+25		1	2004207 2750
2198/2198 — Epoch 38/75	25	/95us/step -	-	toss:	2084307.3730
2198/2198 —————	25	817us/sten -	_	1055.	5189234_0000
Epoch 39/75	_3	01, d3, 3 ccp		.0551	310323410000
2198/2198 —————	2s	821us/step -	-	loss:	2261054.5000
Epoch 40/75					
2198/2198 —————	2s	830us/step -	-	loss:	5656730.5000
Epoch 41/75	_			_	40-400
2198/2198 —————	2s	//4us/step -	-	loss:	1374265.6250

E 42.77E					
Epoch 42/75 2198/2198 ————————————————————————————————————	26	707us/stop		10001	1200171 7500
Epoch 43/75	25	/9/us/step	_	1055.	13001/1:/300
2198/2198 ————	2s	793us/step	_	loss:	3195983.7500
Epoch 44/75					
2198/2198	2s	774us/step	_	loss:	2459397.0000
Epoch 45/75					
2198/2198 —	2s	795us/step	-	loss:	3594576.0000
Epoch 46/75	2-	766 / - +		1	4471411 0000
2198/2198 — Epoch 47/75	2 S	/bbus/step	_	loss:	44/1411.0000
2198/2198 ————	25	779us/sten	_	lossi	3332635.7500
Epoch 48/75	23	7730373 CCP			333203317300
2198/2198 ————	2s	787us/step	_	loss:	2026349.0000
Epoch 49/75					
2198/2198 ———————	2s	777us/step	_	loss:	2189077.7500
Epoch 50/75					
2198/2198 —	2s	796us/step	-	loss:	3365745.0000
Epoch 51/75 2198/2198 ————————————————————————————————————	20	70006/6+00		10001	201/221 2500
Epoch 52/75	25	/oous/step	_	1055:	2014331.2300
2198/2198 ————	2s	787us/step	_	loss:	4577983.0000
Epoch 53/75		, o, a, o, o cop			.57.756516666
2198/2198 ——————	2s	772us/step	_	loss:	2817813.7500
Epoch 54/75					
2198/2198 —————	2s	766us/step	-	loss:	4298369.0000
Epoch 55/75	•	770 / 1			1260000 1250
2198/2198 — Epoch 56/75	25	//8us/step	_	loss:	1369980.1250
2198/2198 ————	25	783us/sten	_	lossi	2311948.2500
Epoch 57/75	23	703u3/3ccp			251154012500
2198/2198 —————	2s	770us/step	_	loss:	1464120.7500
Epoch 58/75		·			
2198/2198 —————	2s	784us/step	-	loss:	2367104.2500
Epoch 59/75	_			-	
2198/2198 ————————————————————————————————————	2s	/58us/step	_	loss:	2961186.2500
Epoch 60/75 2198/2198 ————————————————————————————————————	26	777us/stan	_	1000	2207002 7500
Epoch 61/75	23	///us/scep		1033.	229709217300
2198/2198 ————	2s	767us/step	_	loss:	5180553.5000
Epoch 62/75					
2198/2198 ———————	2s	766us/step	_	loss:	2271634.7500
Epoch 63/75					
2198/2198 —	2s	748us/step	-	loss:	2295636.0000
Epoch 64/75	2-	76240/0405		1000	2505656 2500
2198/2198 — Epoch 65/75	25	/ozus/step	_	coss:	Z393030.Z300
2198/2198 ————	25	736us/sten	_	1055	1710867 - 8750
Epoch 66/75		. эсаэ, эсср			1,1000,10750
2198/2198 ————	2s	755us/step	_	loss:	2325464.7500
		•			

Epoch 67/75					
2198/2198 —————	- 2s 763us/step - loss: 3389573.0000				
Epoch 68/75	•				
2198/2198 —————	- 2s 771us/step - loss: 2005215.3750				
Epoch 69/75	·				
2198/2198 —————	- 2s 758us/step - loss: 2183384.5000				
Epoch 70/75					
2198/2198	- 2s 760us/step - loss: 2951634.0000				
Epoch 71/75					
2198/2198	- 2s 731us/step - loss: 2590333.5000				
Epoch 72/75					
2198/2198 —	- 2s 729us/step - loss: 7616990.0000				
Epoch 73/75					
2198/2198 —————	- 2s 729us/step - loss: 4101198.7500				
Epoch 74/75					
2198/2198 —————	- 2s 769us/step - loss: 2002223.3750				
Epoch 75/75					
	- 2s 738us/step - loss: 3092161.5000				
Best Parameters (Reduced): {'modellayers_config': [64, 64, 64], 'epochs':					
75, 'batch_size': 64}					
Optimal Layers Config (Reduced): [64, 64, 64]					
Best Negative MSE (CV): -2778767.8759973818					
550/550 — 0s 748us/step					
Reduced Model Test MSE: 1029620.4618345139					
Reduced Model Test RMSE: 1014.7021542474984					