

Список технологий:









```
def build_rnn_model(input_shape):
    """Builds an LSTM-based RNN model."""
    model = Sequential()
    model.add(LSTM(units=50, return_sequences=True, input_shape=input_shape)) # First LSTM layer
    model.add(LSTM(units=100, return_sequences=True)) # Second LSTM layer
    model.add(Dropout(0.2))
    model.add(LSTM(units=100, return_sequences=True)) # Third LSTM layer
    model.add(Dropout(0.2))
    model.add(LSTM(units=100, return_sequences=True)) # Fourth LSTM layer
    model.add(Dropout(0.2))
    model.add(LSTM(units=50, return_sequences=False)) # Fifth LSTM layer
    model.add(Dropout(0.1))
    model.add(Dense(units=1)) # Output layer
    return model
```

def scale_data(data):

scaler = MinMaxScaler()

return scaled_data, scaler

scaled data = scaler.fit transform(data)

```
import numpy as np
                                       from sklearn.preprocessing import MinMaxScaler
                                       def load and preprocess_data(csv_path, column_name):
                                           df = pd.read csv(csv path)
                                           try:
                                               df['Date'] = pd.to_datetime(df['Date'], format='%m/%d/%Y')
                                           except:
                                               df['Date'] = pd.to_datetime(df['Date'], format='%Y-%m-%d')
                                           df = df.sort values('Date')
def create_sequences(data, seq_length):
                                           df = df.set_index('Date')
   X, y = [], []
                                            df[column_name] = df[column_name].str.replace('$', '').astype(float)
    for i in range(len(data) - seq_length):
                                            data = df[column_name].values.reshape(-1, 1)
       X.append(data[i:(i + seq_length)])
                                           return data, df
       y.append(data[i + seq_length])
    return np.array(X), np.array(y)
```

import pandas as pd

https://github.com/zmeyka3310/gamblingai

```
def main(CSV FILE PATH):
    """Main function to load, preprocess, train, and predict."""
    data, df = preprocessing.load and preprocess_data(CSV_FILE_PATH, PRICE_COLUMN)
    # Scale the data
    data, scaler = preprocessing.scale data(data)
    # Create sequences
    X, y = preprocessing.create_sequences(data, SEQUENCE_LENGTH)
    # Split into training and testing sets
    X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=TEST_SIZE, shuffle=False)
    # Build the RNN model
    model = build_rnn_model((SEQUENCE_LENGTH, 1))
    # Train the model
    model = train model(model, X train, y train, EPOCHS, BATCH SIZE, LEARNING RATE)
    # Get the last sequence from the original scaled data
    last sequence = data[-SEQUENCE LENGTH:]
    # Predict the next value
    predicted_price = predict_next_value(model, last_sequence, scaler)
    # Get the last date from the original dataframe
    last_date = df.index[-1]
    # Calculate the next day
    next_date = last_date + pd.Timedelta(days=1)
    print(f"Predicted price for {next_date.strftime('%Y-%m-%d')}: ${predicted_price:.2f}")
    return predicted price
```

```
def batcher(CSV FILE PATH):
      batches = 10
      predicts = []
      for i in range(batches):
             print("----")
             print("")
             print("")
             print(f"Doing batch {i+1}/{batches}")
             print("")
             print("")
             print("----")
             predicts.append(main(CSV_FILE_PATH))
      print()
      print()
       for item in predicts:
             print(f"Predicted price: ${item:.2f}")
      print(f"Average predicted price: ${sum(predicts)/len(predicts)}")
      return sum(predicts)/len(predicts)
if name == " main ":
      batcher("historicaldata/HDnvda5y.csv")
```

```
import os
from batcher import batcher
def process_files(directory):
    file_data = []
    for filename in os.listdir(directory):
        filepath = os.path.join(directory, filename)
        if os.path.isfile(filepath):
            result = batcher(filepath)
            file_data.append((filename, result))
    for filename, result in file_data:
        print(f"File: {filename}")
        print(f"Result: {result}")
if name == " main ":
    current_directory = "HD5ytesting_nvda"
    process_files(current_directory)
```

https://github.com/zmeyka3310/gamblingai

Read data into DataFrames

```
predicted_df = pd.read_csv(StringIO(predicted_data), sep='\s+', names=['Date', 'Predicted_Price'])
actual df = pd.read csv(StringIO(actual data), sep='\s+', names=['Date', 'Actual Price'])
# Convert 'Date' to datetime objects
predicted_df['Date'] = pd.to_datetime(predicted_df['Date'], format='%m/%d/%Y')
actual_df['Date'] = pd.to_datetime(actual_df['Date'], format='%m/%d/%Y')
# Sort DataFrames by date (important for calculating returns)
predicted_df = predicted_df.sort_values(by='Date').reset_index(drop=True)
actual df = actual df.sort values(by='Date').reset index(drop=True)
# Merge the DataFrames based on 'Date'
df = pd.merge(predicted_df, actual_df, on='Date', how='inner')
# Calculate Returns
df['Old_Price'] = df['Actual_Price'].shift(1) # Get the previous day's actual price
df = df.dropna() # remove the first row which will have a NaN value for Old Price
df['Actual_Return'] = (df['Actual_Price'] / df['Old_Price'] - 1.0)
df['Forecast_Return'] = (df['Predicted_Price'] / df['Old_Price'] - 1.0)
# Define the Universe (Let's assume all days are in the universe)
df['Universe'] = True # All stocks are in the universe
df['Weight_Simple'] = df['Universe'].astype(int) # weight is 1 if in universe, 0 otherwise
```

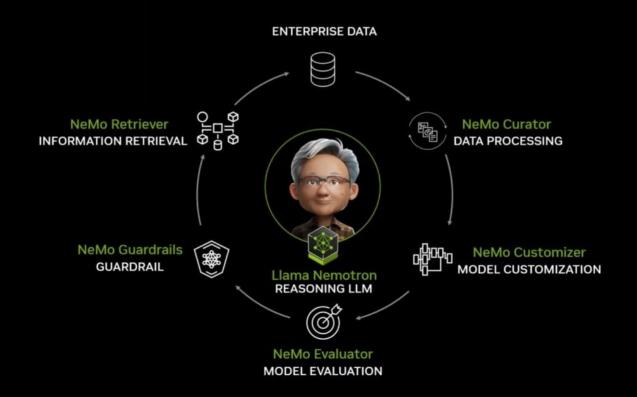
Анализ данных nvda за апрель 2025

	Date	Predicted_Price	Actual_Price	Old_Price	Actual_Return	Forecast_Return	Universe	Weight_Simple
1	2025-04-02	107.290	120.654984	121.001343	-0.002862	-0.113316	True	1
2	2025-04-03	103.510	120.457031	120.654984	-0.001641	-0.142099	√ True	1
3	2025-04-04	98.910	117.120934	120.457031	-0.027695	-0.178877	True	1
4	2025-04-07	87.460	118.441605	117.120934	0.011276	-0.253250	True	1
5	2025-04-08	103.805	114.176285	118.441605	-0.036012	-0.123577	✓ True	1
6	2025-04-09	98.890	112.904823	114.176285	-0.011136	-0.133883	True	1
7	2025-04-10	109.370	110.218651	112.904823	-0.023791	-0.031308	✓ True	1
8	2025-04-11	108.500	107.596191	110.218651	-0.023793	-0.015593	✓ True	1
9	2025-04-14	114.110	106.887497	107.596191	-0.006587	0.060539	X True	1
10	2025-04-15	110.970	104.247292	106.887497	-0.024701	0.038194	X True	1
11	2025-04-16	104.550	107.070778	104.247292	0.027085	0.002904	√ True	1
12	2025-04-17	104.450	105.490906	107.070778	-0.014755	-0.024477	V True	1
13	2025-04-21	98.770	106.665878	105.490906	0.011138	-0.063711	X True	1
14	2025-04-22	98.780	105.985756	106.665878	-0.006376	-0.073931	✓ True	1
15	2025-04-23	104.520	109.672325	105.985756	0.034784	-0.013830	X True	1
16	2025-04-24	103.475	111.707169	109.672325	0.018554	-0.056508	True	1
17	2025-04-25	106.850	109.782875	111.707169	-0.017226	-0.043481	True	1
18	2025-04-28	109.690	111.169472	109.782875	0.012630	-0.000846	X True	1
19	2025-04-29	107.670	109.307678	111.169472	-0.016747	-0.031479	True	1
20	2025-04-30	104.470	108.387070	109.307678	-0.008422	-0.044257	True	1

И где мы просчитались?

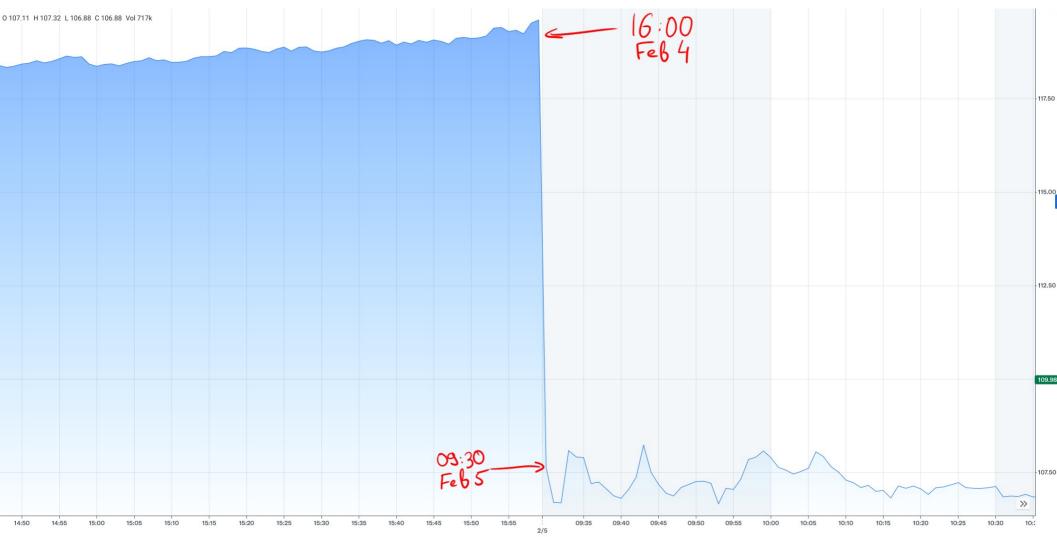
Announcing NVIDIA NeMo Microservices

End-to-End Platform for Building Al Agents to Scale Employee Productivity With Data Flywheel Using Human and Al Feedback





Частичный отказ amd от ИИ



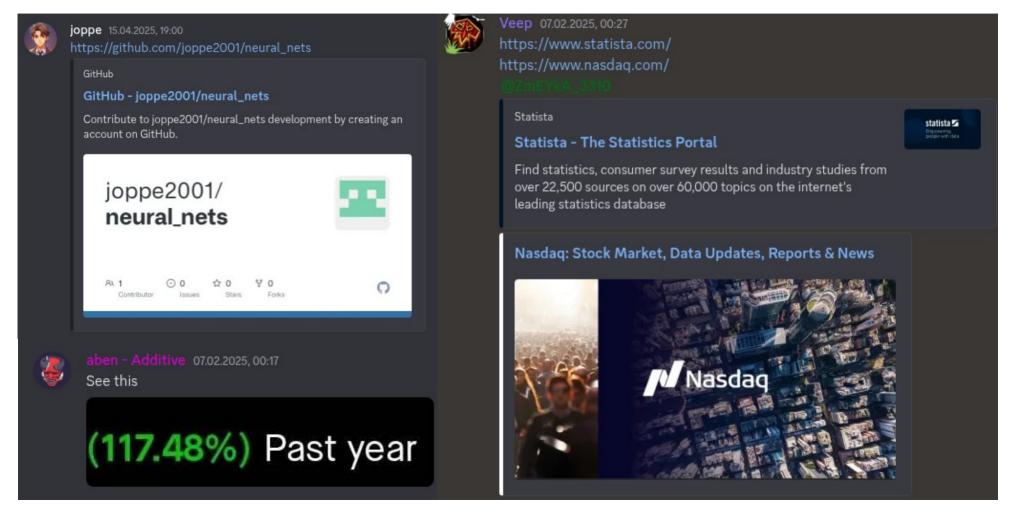
Потенциальные проблемы

Их нет

Потенциальные решения

- Использовать всю информацию в файлах, а не только столбец который пытаемся предугадать.
- Больше циклов тренировки модели
- Использовать информацию из внешних источников
- Тренировать все модели параллельно.
- ????

Выражаю благодарность этим людям:





Спасибо за внимание





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