

# keras

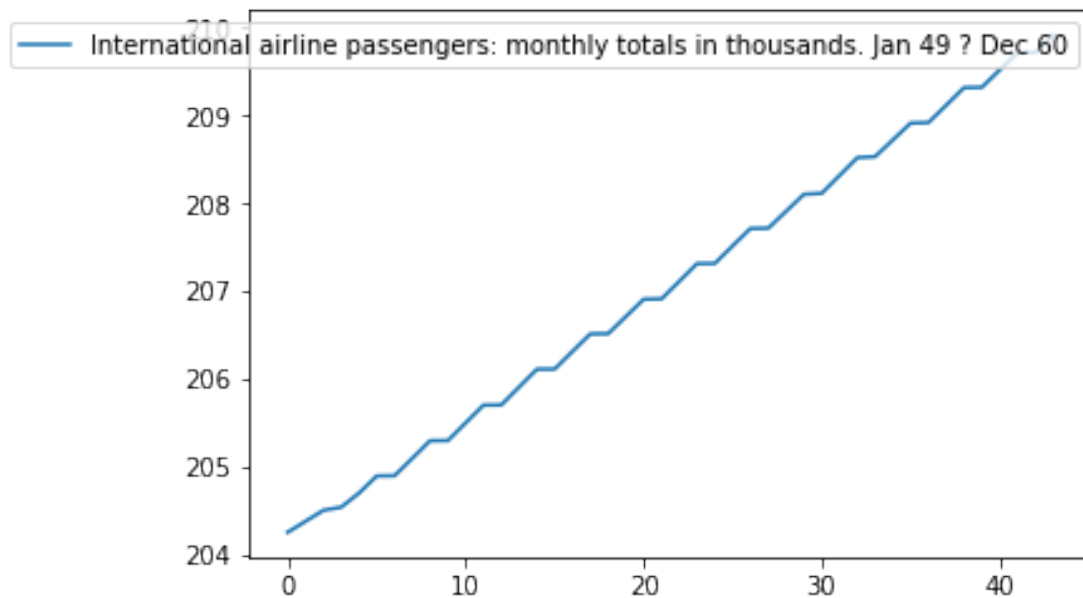
April 30, 2018

```
In [1]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
%matplotlib inline

df = pd.read_csv("international-airline-passengers.csv", skipfooter=3)
df.plot()
```

/Users/katsucurry/.pyenv/versions/3.6.1/lib/python3.6/site-packages/ipykernel\_launcher.py:6: Par

Out[1]: <matplotlib.axes.\_subplots.AxesSubplot at 0x10b5afa20>



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In [2]: #
passenger = np.array(df.iloc[:, 1].astype('float32'))
```

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In [3]: #
def shift(data, n = 1):
    X = data[:-n]
    y = data[n:]

    return X, y

#
def difference(data, n = 1):
    d1, d2 = shift(data, n)
    diffed = d2 - d1
    return diffed

#
def inv_diff(base, diff, n = 1):
    inv = np.zeros_like(diff)

    for i in range(len(diff)):
        if i <= n - 1:
            inv[i] = base[i]
        else:
            inv[i] = inv[i - n] + diff[i - n]

    return inv

In [4]: X_d, y_d = shift(difference(passenger),1)

In [5]: from sklearn.model_selection import train_test_split

X_d_train, X_d_val, y_d_train, y_d_val = train_test_split(X_d, y_d, test_size = 0.3, shu

In [6]: from sklearn.preprocessing import MinMaxScaler

#
sclr_x = MinMaxScaler(feature_range=(0, 1))
sclr_y = MinMaxScaler(feature_range=(0, 1))

X_d_train = sclr_x.fit_transform(X_d_train.reshape(-1, 1))
X_d_val = sclr_x.transform(X_d_val.reshape(-1, 1))

y_d_train = sclr_y.fit_transform(y_d_train.reshape(-1, 1))
y_d_val = sclr_y.transform(y_d_val.reshape(-1, 1))

In [7]: #
def convert_rnn_input(X, y, ws = 1, dim = 1):
    data = []
    target = []

    #window1

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#ws
if(ws == 1):
    itr = len(X)
else:
    itr = len(X) - ws

for i in range(itr):
    data.append(X[i: i + ws])
    target.append(y[i: i + ws])

#
data = np.array(data).reshape(len(data), ws, dim)
target = np.array(target).reshape(len(data), ws, dim)

return data, target

>window1
X_train_c, y_train_c = convert_rnn_input(X_d_train, y_d_train, 1, 1)
X_val_c, y_val_c = convert_rnn_input(X_d_val, y_d_val, 1, 1)

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In [8]: import keras
        from keras.layers import Input, Embedding, LSTM, Dense, TimeDistributed
        from keras.models import Model
        from keras.optimizers import Adam
        from keras.layers.wrappers import Bidirectional

```

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/Users/katsucurry/.pyenv/versions/3.6.1/lib/python3.6/site-packages/h5py/__init__.py:36: FutureWarning
    from ._conv import register_converters as _register_converters
Using TensorFlow backend.

```

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In [9]: #
        main_input = Input(shape=(X_train_c.shape[1], X_train_c.shape[2]),
                             dtype='float32',
                             batch_shape = (1, X_train_c.shape[1], 1),
                             name='main_input')

        out = LSTM(8, return_sequences = True, stateful = True, activation='tanh')(main_input)
        out = LSTM(16, stateful = True, activation='tanh', return_sequences = True)(out)
        main_output = TimeDistributed(Dense(1, activation='linear', name='output'))(out)

        model = Model(inputs=[main_input], outputs=[main_output])
        model.compile(loss="mse", optimizer=Adam())

```

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In [11]: batch_size = 1
         n_epoch = 2000

         #loss
         log_loss = np.zeros(n_epoch)

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log_val_loss = np.zeros(n_epoch)
models = []

#
for i in range(n_epoch):
    res = model.fit(X_train_c, y_train_c, batch_size = batch_size,
                    epochs = 1, validation_data=(X_val_c, y_val_c), verbose = 2,
                    shuffle = False)

    #loss
    log_loss[i] = res.history['loss'][0]
    log_val_loss[i] = res.history['val_loss'][0]
    models.append(res)

    model.reset_states() #sate

Train on 29 samples, validate on 13 samples
Epoch 1/1
- 1s - loss: 0.4651 - val_loss: 0.3236
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2763 - val_loss: 0.2208
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2517 - val_loss: 0.2061
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2344 - val_loss: 0.1936
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2336 - val_loss: 0.1964
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2289 - val_loss: 0.1939
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2257 - val_loss: 0.1924
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2230 - val_loss: 0.1913
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2204 - val_loss: 0.1903
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2179 - val_loss: 0.1894
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.2155 - val_loss: 0.1887
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2132 - val_loss: 0.1881
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2110 - val_loss: 0.1876
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2088 - val_loss: 0.1874
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2066 - val_loss: 0.1875
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2045 - val_loss: 0.1879
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2025 - val_loss: 0.1888
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2007 - val_loss: 0.1900
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1989 - val_loss: 0.1912
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1973 - val_loss: 0.1915
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1958 - val_loss: 0.1898
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1944 - val_loss: 0.1860
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1931 - val_loss: 0.1847
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1923 - val_loss: 0.1971
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1929 - val_loss: 0.1965
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1925 - val_loss: 0.2131
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.3125 - val_loss: 0.8614
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.5913 - val_loss: 0.1940
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.3513 - val_loss: 0.2525
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2112 - val_loss: 0.1844
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1980 - val_loss: 0.1835
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1955 - val_loss: 0.1832
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1940 - val_loss: 0.1833
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1926 - val_loss: 0.1836
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1912 - val_loss: 0.1844
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1899 - val_loss: 0.1858
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1888 - val_loss: 0.1878
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1878 - val_loss: 0.1900
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1870 - val_loss: 0.1924
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1863 - val_loss: 0.1948
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1857 - val_loss: 0.1970
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1851 - val_loss: 0.1988
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1844 - val_loss: 0.2006
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1837 - val_loss: 0.2018
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1828 - val_loss: 0.2027
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1818 - val_loss: 0.2031
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1806 - val_loss: 0.2033
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1792 - val_loss: 0.2029
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1775 - val_loss: 0.2014
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1757 - val_loss: 0.1985
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1738 - val_loss: 0.1930
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1724 - val_loss: 0.1832
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1722 - val_loss: 0.1703
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1720 - val_loss: 0.1636
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1715 - val_loss: 0.1633
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1708 - val_loss: 0.1746
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1831 - val_loss: 0.3206
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2074 - val_loss: 0.2758
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.3018 - val_loss: 0.1845
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2213 - val_loss: 0.2675
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1842 - val_loss: 0.3223
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1760 - val_loss: 0.1920
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1831 - val_loss: 0.2420
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1778 - val_loss: 0.1809
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1851 - val_loss: 0.1809
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1795 - val_loss: 0.1917
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1810 - val_loss: 0.1732
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1755 - val_loss: 0.2939
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1754 - val_loss: 0.1684
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1779 - val_loss: 0.3009
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1720 - val_loss: 0.1752
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1791 - val_loss: 0.2470
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1706 - val_loss: 0.1790
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1742 - val_loss: 0.2004
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1688 - val_loss: 0.1783
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1685 - val_loss: 0.1800
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1659 - val_loss: 0.1743
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1643 - val_loss: 0.1727
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1624 - val_loss: 0.1710
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1603 - val_loss: 0.1695
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1580 - val_loss: 0.1676
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1554 - val_loss: 0.1652
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1524 - val_loss: 0.1617
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1489 - val_loss: 0.1547
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1451 - val_loss: 0.1443
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1415 - val_loss: 0.1478
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1397 - val_loss: 0.1965
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1381 - val_loss: 0.1543
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2820 - val_loss: 1.0518
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.5128 - val_loss: 0.2268
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.2060 - val_loss: 0.1723
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1651 - val_loss: 0.1743
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1660 - val_loss: 0.1600
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1638 - val_loss: 0.1837
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1630 - val_loss: 0.1930
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1621 - val_loss: 0.1916
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1618 - val_loss: 0.1910
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1612 - val_loss: 0.1884
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1604 - val_loss: 0.1853
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1595 - val_loss: 0.1820
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1585 - val_loss: 0.1786
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1573 - val_loss: 0.1743
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1559 - val_loss: 0.1684
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1542 - val_loss: 0.1590
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1518 - val_loss: 0.1464
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1486 - val_loss: 0.1507
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1457 - val_loss: 0.1908
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1433 - val_loss: 0.2364
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1432 - val_loss: 0.2744
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1420 - val_loss: 0.2991
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1414 - val_loss: 0.3290
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1417 - val_loss: 0.3624
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1436 - val_loss: 0.4008
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1437 - val_loss: 0.4185
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1538 - val_loss: 0.4647
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1371 - val_loss: 0.3696
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2612 - val_loss: 0.5449
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2154 - val_loss: 0.2239
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2147 - val_loss: 0.4954
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1545 - val_loss: 0.1407
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1516 - val_loss: 0.1565
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1484 - val_loss: 0.2502
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1462 - val_loss: 0.2554
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1464 - val_loss: 0.2885
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1441 - val_loss: 0.2811
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1435 - val_loss: 0.2970
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1414 - val_loss: 0.2941
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1402 - val_loss: 0.3073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1382 - val_loss: 0.3123
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1367 - val_loss: 0.3366
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1342 - val_loss: 0.3344
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1305 - val_loss: 0.3072
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1268 - val_loss: 0.1511
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1466 - val_loss: 0.4518
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1576 - val_loss: 0.4321
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1891 - val_loss: 0.1802
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1360 - val_loss: 0.2665
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1384 - val_loss: 0.3159
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1376 - val_loss: 0.3883
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1371 - val_loss: 0.1284
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2235 - val_loss: 0.2017
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1811 - val_loss: 0.1361
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1426 - val_loss: 0.1323
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1359 - val_loss: 0.1274
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1321 - val_loss: 0.1330
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1294 - val_loss: 0.1410
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1508 - val_loss: 0.2060
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1470 - val_loss: 0.2590
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1257 - val_loss: 0.1395
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1260 - val_loss: 0.2825
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1551 - val_loss: 0.1371
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1912 - val_loss: 0.1936
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1427 - val_loss: 0.1569
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1445 - val_loss: 0.1486
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1335 - val_loss: 0.1233
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1327 - val_loss: 0.1269
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1447 - val_loss: 0.2365
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1362 - val_loss: 0.2537
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1406 - val_loss: 0.2266
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1327 - val_loss: 0.2557
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1209 - val_loss: 0.2610
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1250 - val_loss: 0.1365
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1492 - val_loss: 0.4675
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1385 - val_loss: 0.2112
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1266 - val_loss: 0.1311
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1624 - val_loss: 0.2647
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1435 - val_loss: 0.2669
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1675 - val_loss: 0.1543
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1436 - val_loss: 0.1920
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1452 - val_loss: 0.1300
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1385 - val_loss: 0.1621
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1334 - val_loss: 0.1588
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1274 - val_loss: 0.1906
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1272 - val_loss: 0.1609
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1391 - val_loss: 0.3049
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1360 - val_loss: 0.1934
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1273 - val_loss: 0.2019
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1590 - val_loss: 0.1285
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1482 - val_loss: 0.1973
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1369 - val_loss: 0.1367
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1323 - val_loss: 0.1251
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1317 - val_loss: 0.1409
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1246 - val_loss: 0.1585
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1205 - val_loss: 0.1827
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1334 - val_loss: 0.3511
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1303 - val_loss: 0.1780
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1245 - val_loss: 0.1875
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1349 - val_loss: 0.1475
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1308 - val_loss: 0.2257
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1370 - val_loss: 0.1241
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1337 - val_loss: 0.1817
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1197 - val_loss: 0.1371
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1260 - val_loss: 0.1170
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1269 - val_loss: 0.1781
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1120 - val_loss: 0.1776
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1087 - val_loss: 0.1959
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1050 - val_loss: 0.2048
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1240 - val_loss: 0.8801
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1282 - val_loss: 0.5645
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1203 - val_loss: 0.3765
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1612 - val_loss: 0.1281
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.6785 - val_loss: 0.4722
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1425 - val_loss: 0.1195
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1421 - val_loss: 0.1191
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1323 - val_loss: 0.1143
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1257 - val_loss: 0.1301
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1286 - val_loss: 0.1424
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1243 - val_loss: 0.1393
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1212 - val_loss: 0.1379
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1159 - val_loss: 0.1530
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1127 - val_loss: 0.1452
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1123 - val_loss: 0.1025
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1138 - val_loss: 0.1030
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1130 - val_loss: 0.1109
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1100 - val_loss: 0.1040
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1320 - val_loss: 0.1478
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1371 - val_loss: 0.1169
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1259 - val_loss: 0.1540
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1190 - val_loss: 0.1351
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1106 - val_loss: 0.1675
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1193 - val_loss: 0.1158
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1083 - val_loss: 0.1499
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1005 - val_loss: 0.1746
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0976 - val_loss: 0.1429
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0980 - val_loss: 0.0892
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1060 - val_loss: 0.0908
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1062 - val_loss: 0.1048
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0996 - val_loss: 0.0914
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1545 - val_loss: 0.1154
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.3230 - val_loss: 0.2387
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1212 - val_loss: 0.0963
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1161 - val_loss: 0.0975
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1019 - val_loss: 0.1289
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1022 - val_loss: 0.0890
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0952 - val_loss: 0.0890
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0938 - val_loss: 0.0852
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0917 - val_loss: 0.0834
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0898 - val_loss: 0.0813
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0882 - val_loss: 0.0790
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0867 - val_loss: 0.0768
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0856 - val_loss: 0.0750
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0848 - val_loss: 0.0740
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0848 - val_loss: 0.0751
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0903 - val_loss: 0.0876
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0953 - val_loss: 0.1265
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0775 - val_loss: 0.0648
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0996 - val_loss: 0.1304
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1367 - val_loss: 0.1842
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0829 - val_loss: 0.0655
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0859 - val_loss: 0.0901
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0830 - val_loss: 0.0651
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0689 - val_loss: 0.0634
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0682 - val_loss: 0.0600
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0686 - val_loss: 0.0626
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0719 - val_loss: 0.0771
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0851 - val_loss: 0.0643
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1031 - val_loss: 0.6922
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2482 - val_loss: 0.2322
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.3914 - val_loss: 0.1235
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0932 - val_loss: 0.0819
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0897 - val_loss: 0.0782
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0882 - val_loss: 0.0760
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0866 - val_loss: 0.0752
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0843 - val_loss: 0.0740
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0818 - val_loss: 0.0721
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0794 - val_loss: 0.0697
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0776 - val_loss: 0.0685
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0756 - val_loss: 0.0674
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0737 - val_loss: 0.0663
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0719 - val_loss: 0.0656
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0704 - val_loss: 0.0656
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0690 - val_loss: 0.0664
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0679 - val_loss: 0.0684
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0670 - val_loss: 0.0722
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0662 - val_loss: 0.0779
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0656 - val_loss: 0.0871
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0640 - val_loss: 0.0936
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0619 - val_loss: 0.1010
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0607 - val_loss: 0.1165
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0605 - val_loss: 0.1453
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0603 - val_loss: 0.1863
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0539 - val_loss: 0.1143
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0625 - val_loss: 0.1146
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.3974 - val_loss: 0.9120
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.6991 - val_loss: 0.2193
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1077 - val_loss: 0.0894
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0933 - val_loss: 0.0751
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0939 - val_loss: 0.0705
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0861 - val_loss: 0.0679
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0851 - val_loss: 0.0683
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0806 - val_loss: 0.0649
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0774 - val_loss: 0.0629
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0742 - val_loss: 0.0615
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0711 - val_loss: 0.0601
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0678 - val_loss: 0.0579
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0652 - val_loss: 0.0556
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0625 - val_loss: 0.0545
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0607 - val_loss: 0.0594
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0584 - val_loss: 0.0594
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0619 - val_loss: 0.1293
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0738 - val_loss: 0.1141
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2616 - val_loss: 0.4817
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.3270 - val_loss: 0.1018
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0787 - val_loss: 0.0652
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0852 - val_loss: 0.0616
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0730 - val_loss: 0.0572
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0783 - val_loss: 0.0620
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0695 - val_loss: 0.0586
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0679 - val_loss: 0.0595
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0644 - val_loss: 0.0595
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0607 - val_loss: 0.0548
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0585 - val_loss: 0.0559
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0554 - val_loss: 0.0504
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0536 - val_loss: 0.0562
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0515 - val_loss: 0.0541
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0495 - val_loss: 0.0547
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0521 - val_loss: 0.1100
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0463 - val_loss: 0.0554
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0738 - val_loss: 0.3287
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0645 - val_loss: 0.1276
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0822 - val_loss: 0.1248
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1948 - val_loss: 0.8902
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.4432 - val_loss: 0.0931
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2533 - val_loss: 0.1165
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1224 - val_loss: 0.0980
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0974 - val_loss: 0.0815
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0821 - val_loss: 0.0693
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0729 - val_loss: 0.0611
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0682 - val_loss: 0.0576
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0647 - val_loss: 0.0561
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0614 - val_loss: 0.0494
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0586 - val_loss: 0.0514
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0558 - val_loss: 0.0457
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0524 - val_loss: 0.0497
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0510 - val_loss: 0.0437
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0482 - val_loss: 0.0442
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0484 - val_loss: 0.0662
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0461 - val_loss: 0.0421
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0497 - val_loss: 0.1295
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0486 - val_loss: 0.0446
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0708 - val_loss: 0.2826
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.3768 - val_loss: 1.9002
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.8985 - val_loss: 0.5028
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.3040 - val_loss: 0.1327
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1297 - val_loss: 0.1173
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1264 - val_loss: 0.1171
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1254 - val_loss: 0.1164
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1239 - val_loss: 0.1155
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1220 - val_loss: 0.1152
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1194 - val_loss: 0.1134
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1135 - val_loss: 0.1117
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1052 - val_loss: 0.1078
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0886 - val_loss: 0.0876
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0767 - val_loss: 0.0732
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0674 - val_loss: 0.0627
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0615 - val_loss: 0.0569
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0579 - val_loss: 0.0561
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0555 - val_loss: 0.0600
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0542 - val_loss: 0.0680
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0527 - val_loss: 0.0724
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0530 - val_loss: 0.0949
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0498 - val_loss: 0.0773
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0573 - val\_loss: 0.1821  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.0567 - val\_loss: 0.0379  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.1326 - val\_loss: 0.3909  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.2791 - val\_loss: 0.1950  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.2593 - val\_loss: 0.1440  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.2138 - val\_loss: 0.1831  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.0764 - val\_loss: 0.0647  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.0833 - val\_loss: 0.0954  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.0630 - val\_loss: 0.0632  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.0696 - val\_loss: 0.0582  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.0702 - val\_loss: 0.0947  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.1038 - val\_loss: 0.0619  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.1039 - val\_loss: 0.1113  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.1352 - val\_loss: 0.0997  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.0865 - val\_loss: 0.1023  
Train on 29 samples, validate on 13 samples  
Epoch 1/1  
- 0s - loss: 0.1176 - val\_loss: 0.1157  
Train on 29 samples, validate on 13 samples  
Epoch 1/1

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- 0s - loss: 0.0670 - val_loss: 0.0774
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0980 - val_loss: 0.0968
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0753 - val_loss: 0.0785
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1127 - val_loss: 0.1114
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0647 - val_loss: 0.0691
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1022 - val_loss: 0.1078
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0626 - val_loss: 0.0625
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1011 - val_loss: 0.1070
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0609 - val_loss: 0.0553
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0989 - val_loss: 0.1082
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0576 - val_loss: 0.0497
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0957 - val_loss: 0.1113
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0542 - val_loss: 0.0445
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0909 - val_loss: 0.1072
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0569 - val_loss: 0.0435
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0903 - val_loss: 0.1201
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0507 - val_loss: 0.0383
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0777 - val_loss: 0.0994
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0572 - val_loss: 0.0490
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0898 - val_loss: 0.2207
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0417 - val_loss: 0.0345
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0599 - val_loss: 0.0375
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0710 - val_loss: 0.0880
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1422 - val_loss: 0.4575
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0452 - val_loss: 0.0381
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0690 - val_loss: 0.1637
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0458 - val_loss: 0.0355
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0853 - val_loss: 0.1105
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0546 - val_loss: 0.0573
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0894 - val_loss: 0.2237
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0519 - val_loss: 0.1449
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0483 - val_loss: 0.0600
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0594 - val_loss: 0.0591
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0811 - val_loss: 0.1936
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1377 - val_loss: 0.1718
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0485 - val_loss: 0.0676
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0690 - val_loss: 0.1884
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0727 - val_loss: 0.2653
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0778 - val_loss: 0.5859
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0969 - val_loss: 0.2005
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1316 - val_loss: 0.1345
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0845 - val_loss: 0.1345
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0757 - val_loss: 0.0995
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0592 - val_loss: 0.1901
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0550 - val_loss: 0.1998
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0533 - val_loss: 0.2122
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0566 - val_loss: 0.4156
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0552 - val_loss: 0.1439
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1354 - val_loss: 0.1362
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0376 - val_loss: 0.0478
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0432 - val_loss: 0.0449
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0759 - val_loss: 0.1140
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0697 - val_loss: 0.0848
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1219 - val_loss: 0.1456
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0478 - val_loss: 0.0264
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1038 - val_loss: 0.3804
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0918 - val_loss: 0.1244
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0692 - val_loss: 0.5366
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0666 - val_loss: 0.5774
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1171 - val_loss: 0.4930
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1344 - val_loss: 0.1405
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0890 - val_loss: 0.1330
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0462 - val_loss: 0.0308
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1218 - val_loss: 0.4747
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1144 - val_loss: 0.1356
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0635 - val_loss: 0.1384
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0577 - val_loss: 0.5540
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0569 - val_loss: 0.0919
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1212 - val_loss: 0.1330
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0383 - val_loss: 0.1348
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1906 - val_loss: 0.6555
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1182 - val_loss: 0.1365
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0833 - val_loss: 0.1343
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0446 - val_loss: 0.1292
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1731 - val_loss: 0.5344
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1190 - val_loss: 0.1391
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0848 - val_loss: 0.1362
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0460 - val_loss: 0.1167
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1653 - val_loss: 0.4824
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1216 - val_loss: 0.1405
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0875 - val_loss: 0.1373
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0504 - val_loss: 0.1195
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0560 - val_loss: 0.1655
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1135 - val_loss: 0.1374
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0344 - val_loss: 0.0740
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0594 - val_loss: 0.1295
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0696 - val_loss: 0.2908
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1177 - val_loss: 0.1386
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0392 - val_loss: 0.0218
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1148 - val_loss: 0.4569
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1083 - val_loss: 0.1384
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0474 - val_loss: 0.1340
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0595 - val_loss: 0.1152
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1209 - val_loss: 0.1362
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0347 - val_loss: 0.0791
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1344 - val_loss: 0.4597
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0895 - val_loss: 0.1365
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0400 - val_loss: 0.1448
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0419 - val_loss: 0.1185
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0406 - val_loss: 0.0502
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0762 - val_loss: 0.1585
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0797 - val_loss: 0.3538
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0972 - val_loss: 0.1360
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1140 - val_loss: 0.3807
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0904 - val_loss: 0.1448
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0526 - val_loss: 0.0940
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1190 - val_loss: 0.1449
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0761 - val_loss: 0.1295
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0331 - val_loss: 0.0671
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1151 - val_loss: 0.4280
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1126 - val_loss: 0.1387
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0546 - val_loss: 0.2222
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0902 - val_loss: 0.1368
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0290 - val_loss: 0.0720
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0356 - val_loss: 0.0269
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1477 - val_loss: 0.5280
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1090 - val_loss: 0.1401
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0324 - val_loss: 0.0524
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0883 - val_loss: 0.1344
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0230 - val_loss: 0.0730
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0371 - val_loss: 0.0824
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0891 - val_loss: 0.1292
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0716 - val_loss: 0.4608
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0943 - val_loss: 0.1350
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0708 - val_loss: 0.6029
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1325 - val_loss: 0.1422
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0826 - val_loss: 0.1342
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0528 - val_loss: 0.1538
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0229 - val_loss: 0.0772
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1228 - val_loss: 0.4462
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0278 - val_loss: 0.1551
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0508 - val_loss: 0.1096
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1561 - val_loss: 0.1380
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0533 - val_loss: 0.3335
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0387 - val_loss: 0.1494
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0359 - val_loss: 0.0739
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0947 - val_loss: 0.1366
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0791 - val_loss: 0.3658
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0666 - val_loss: 0.1319
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0467 - val_loss: 0.0704
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1263 - val_loss: 0.1371
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0194 - val_loss: 0.0625
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0592 - val_loss: 0.2790
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0832 - val_loss: 0.1322
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0436 - val_loss: 0.0566
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1104 - val_loss: 0.1339
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0359 - val_loss: 0.1473
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0267 - val_loss: 0.0473
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0896 - val_loss: 0.2536
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1227 - val_loss: 0.1302
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0601 - val_loss: 0.0440
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0481 - val_loss: 0.1649
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0446 - val_loss: 0.1800
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1464 - val_loss: 0.4474
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1903 - val_loss: 0.1402
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1145 - val_loss: 0.1363
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0760 - val_loss: 0.1413
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0655 - val_loss: 0.1377
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0495 - val_loss: 0.1419
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0261 - val_loss: 0.1683
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0291 - val_loss: 0.4661
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0572 - val_loss: 0.1354
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1669 - val_loss: 0.3243
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1030 - val_loss: 0.1163
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1314 - val_loss: 0.1348
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0464 - val_loss: 0.1348
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0621 - val_loss: 0.1288
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0241 - val_loss: 0.0835
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0769 - val_loss: 0.1304
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0508 - val_loss: 0.1079
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0661 - val_loss: 0.1306
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0397 - val_loss: 0.0597
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0861 - val_loss: 0.1317
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0254 - val_loss: 0.0469
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0755 - val_loss: 0.1306
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0180 - val_loss: 0.0629
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0616 - val_loss: 0.1197
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0346 - val_loss: 0.0751
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0890 - val_loss: 0.1340
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0348 - val_loss: 0.0394
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0673 - val_loss: 0.1317
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0178 - val_loss: 0.0132
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0271 - val_loss: 0.1483
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0354 - val_loss: 0.0258
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1275 - val_loss: 0.1345
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0405 - val_loss: 0.0281
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0452 - val_loss: 0.1467
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0596 - val_loss: 0.1162
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0646 - val_loss: 0.0333
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1092 - val_loss: 0.1258
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0378 - val_loss: 0.3223
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0188 - val_loss: 0.0461
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0437 - val_loss: 0.1468
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0176 - val_loss: 0.0453
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0737 - val_loss: 0.1149
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0733 - val_loss: 0.0192
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1042 - val_loss: 0.1266
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0169 - val_loss: 0.0435
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0229 - val_loss: 0.2586
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0338 - val_loss: 0.1636
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0201 - val_loss: 0.0722
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0172 - val_loss: 0.1078
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0635 - val_loss: 0.4788
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1081 - val_loss: 0.1244
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1000 - val_loss: 0.2908
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0305 - val_loss: 0.0608
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1053 - val_loss: 0.1274
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0637 - val_loss: 0.1338
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0632 - val_loss: 0.1233
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0279 - val_loss: 0.0591
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0828 - val_loss: 0.1230
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0148 - val_loss: 0.0091
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0153 - val_loss: 0.1348
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0416 - val_loss: 0.1340
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0266 - val_loss: 0.0988
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0901 - val_loss: 0.1223
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0830 - val_loss: 0.1586
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0180 - val_loss: 0.0478
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0187 - val_loss: 0.2904
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0144 - val_loss: 0.2045
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0145 - val_loss: 0.0531
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0445 - val_loss: 0.0404
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1243 - val_loss: 0.1234
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0234 - val_loss: 0.0211
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0359 - val_loss: 0.0819
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1045 - val_loss: 0.0364
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0923 - val_loss: 0.1223
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0163 - val_loss: 0.0389
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0301 - val_loss: 0.0860
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0388 - val_loss: 0.1490
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0408 - val_loss: 0.0468
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1099 - val_loss: 0.1193
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0294 - val_loss: 0.3481
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0205 - val_loss: 0.0442
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0176 - val_loss: 0.0349
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0157 - val_loss: 0.0287
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0163 - val_loss: 0.0436
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0156 - val_loss: 0.0413
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0425 - val_loss: 0.2957
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0996 - val_loss: 0.1191
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0185 - val_loss: 0.0307
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0349 - val_loss: 0.0808
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0466 - val_loss: 0.1592
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0503 - val_loss: 0.1343
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1139 - val_loss: 0.0502
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1719 - val_loss: 0.1287
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1221 - val_loss: 0.1260
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0775 - val_loss: 0.1384
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0698 - val_loss: 0.1275
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0539 - val_loss: 0.1204
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0474 - val_loss: 0.1120
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0270 - val_loss: 0.1470
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0305 - val_loss: 0.1279
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0991 - val_loss: 0.3591
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0789 - val_loss: 0.0137
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0953 - val_loss: 0.1207
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0192 - val_loss: 0.0434
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0218 - val_loss: 0.1033
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0476 - val_loss: 0.1118
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0214 - val_loss: 0.0598
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0455 - val_loss: 0.1144
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0175 - val_loss: 0.0648
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0368 - val_loss: 0.1054
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0123 - val_loss: 0.0249
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0158 - val_loss: 0.0242
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0203 - val_loss: 0.0159
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0626 - val_loss: 0.1205
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0258 - val_loss: 0.0745
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0554 - val_loss: 0.1174
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0146 - val_loss: 0.0107
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0227 - val_loss: 0.0555
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0155 - val_loss: 0.0479
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0150 - val_loss: 0.0517
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0279 - val_loss: 0.0296
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0946 - val_loss: 0.1165
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0411 - val_loss: 0.0466
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0918 - val_loss: 0.1288
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0731 - val_loss: 0.1219
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0461 - val_loss: 0.1219
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0303 - val_loss: 0.1337
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0383 - val_loss: 0.1044
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0592 - val_loss: 0.1094
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0432 - val_loss: 0.0241
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0918 - val_loss: 0.1183
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0159 - val_loss: 0.0422
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0345 - val_loss: 0.0603
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0345 - val_loss: 0.1145
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0345 - val_loss: 0.1026
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0293 - val_loss: 0.0169
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0916 - val_loss: 0.1181
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0163 - val_loss: 0.0565
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0292 - val_loss: 0.1198
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0375 - val_loss: 0.1151
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0172 - val_loss: 0.0351
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0261 - val_loss: 0.0519
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0122 - val_loss: 0.0547
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0176 - val_loss: 0.0667
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0143 - val_loss: 0.0565
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0326 - val_loss: 0.0990
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0806 - val_loss: 0.0147
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1338 - val_loss: 0.1247
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1110 - val_loss: 0.1341
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0992 - val_loss: 0.1512
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0696 - val_loss: 0.1358
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0515 - val_loss: 0.1230
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0344 - val_loss: 0.2293
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0634 - val_loss: 0.1240
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0233 - val_loss: 0.0481
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0378 - val_loss: 0.1121
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0453 - val_loss: 0.0208
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0344 - val_loss: 0.0298
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0747 - val_loss: 0.1248
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0178 - val_loss: 0.0243
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0897 - val_loss: 0.1386
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0270 - val_loss: 0.1107
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0232 - val_loss: 0.0237
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0240 - val_loss: 0.0444
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0519 - val_loss: 0.1259
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0157 - val_loss: 0.0453
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0634 - val_loss: 0.1671
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0267 - val_loss: 0.0242
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1303 - val_loss: 0.1354
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0665 - val_loss: 0.1696
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0968 - val_loss: 0.1435
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0775 - val_loss: 0.1271
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0092 - val_loss: 0.0061
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0176 - val_loss: 0.0208
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0782 - val_loss: 0.1546
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0327 - val_loss: 0.0285
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1209 - val_loss: 0.1341
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1008 - val_loss: 0.1421
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0897 - val_loss: 0.1342
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0284 - val_loss: 0.0305
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0923 - val_loss: 0.0391
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1122 - val_loss: 0.1296
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1004 - val_loss: 0.1262
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0814 - val_loss: 0.1257
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0649 - val_loss: 0.1225
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0452 - val_loss: 0.1203
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0217 - val_loss: 0.0711
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0298 - val_loss: 0.0129
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1039 - val_loss: 0.1249
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0140 - val_loss: 0.0071
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0246 - val_loss: 0.0733
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0159 - val_loss: 0.1137
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0482 - val_loss: 0.1026
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0377 - val_loss: 0.0168
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0922 - val_loss: 0.1223
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0225 - val_loss: 0.0203
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0531 - val_loss: 0.1140
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0279 - val_loss: 0.0763
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0333 - val_loss: 0.1552
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0516 - val_loss: 0.0289
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0836 - val_loss: 0.1253
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0385 - val_loss: 0.0233
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0403 - val_loss: 0.0261
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0621 - val_loss: 0.1179
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0376 - val_loss: 0.0829
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0240 - val_loss: 0.0466
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0395 - val_loss: 0.0163
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0745 - val_loss: 0.1216
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0120 - val_loss: 0.0157
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0169 - val_loss: 0.0340
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0237 - val_loss: 0.0144
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0387 - val_loss: 0.0900
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0221 - val_loss: 0.0105
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0709 - val_loss: 0.1178
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0151 - val_loss: 0.0132
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0478 - val_loss: 0.0250
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0455 - val_loss: 0.0183
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0697 - val_loss: 0.1284
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0371 - val_loss: 0.1174
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0337 - val_loss: 0.0219
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0323 - val_loss: 0.0919
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0228 - val_loss: 0.0815
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0351 - val_loss: 0.0928
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0393 - val_loss: 0.0091
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1431 - val_loss: 0.1994
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0364 - val_loss: 0.0843
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0294 - val_loss: 0.0269
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0291 - val_loss: 0.0448
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0263 - val_loss: 0.0443
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0146 - val_loss: 0.0528
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0368 - val_loss: 0.1108
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0185 - val_loss: 0.0168
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0353 - val_loss: 0.1043
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0162 - val_loss: 0.0227
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0174 - val_loss: 0.0247
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0141 - val_loss: 0.0218
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0145 - val_loss: 0.0377
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0164 - val_loss: 0.0234
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0444 - val_loss: 0.1012
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0229 - val_loss: 0.0221
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0144 - val_loss: 0.0465
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0154 - val_loss: 0.0265
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0146 - val_loss: 0.0213
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0176 - val_loss: 0.0267
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0181 - val_loss: 0.0296
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0188 - val_loss: 0.0375
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0155 - val_loss: 0.0300
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0138 - val_loss: 0.0317
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0190 - val_loss: 0.0393
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0155 - val_loss: 0.0364
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0141 - val_loss: 0.0328
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0203 - val_loss: 0.0146
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0176 - val_loss: 0.0307
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0185 - val_loss: 0.0196
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0148 - val_loss: 0.0332
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0150 - val_loss: 0.0314
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0161 - val_loss: 0.0303
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0284 - val_loss: 0.0121
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0465 - val_loss: 0.0229
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0338 - val_loss: 0.0373
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0472 - val_loss: 0.0167
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0887 - val_loss: 0.1168
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0172 - val_loss: 0.0402
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0254 - val_loss: 0.0641
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0135 - val_loss: 0.0415
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0137 - val_loss: 0.0447
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0184 - val_loss: 0.0180
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0180 - val_loss: 0.0346
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0304 - val_loss: 0.0162
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0165 - val_loss: 0.0265
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0178 - val_loss: 0.0532
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0221 - val_loss: 0.0212
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0142 - val_loss: 0.0585
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0173 - val_loss: 0.0253
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0200 - val_loss: 0.0508
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0427 - val_loss: 0.0901
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0129 - val_loss: 0.0537
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0228 - val_loss: 0.0536
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0120 - val_loss: 0.0514
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0204 - val_loss: 0.0370
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0177 - val_loss: 0.0285
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0640 - val_loss: 0.0892
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0106 - val_loss: 0.0379
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0319 - val_loss: 0.0216
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0192 - val_loss: 0.0261
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0373 - val_loss: 0.0504
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0171 - val_loss: 0.0154
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0161 - val_loss: 0.0611
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0151 - val_loss: 0.0437
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0226 - val_loss: 0.0104
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0215 - val_loss: 0.0447
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0116 - val_loss: 0.0782
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0142 - val_loss: 0.0587
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0126 - val_loss: 0.0782
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0223 - val_loss: 0.0262
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0129 - val_loss: 0.0880
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0151 - val_loss: 0.0607
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0134 - val_loss: 0.0512
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0297 - val_loss: 0.0408
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0161 - val_loss: 0.0094
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0157 - val_loss: 0.0473
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0144 - val_loss: 0.0701
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0156 - val_loss: 0.0892
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0147 - val_loss: 0.1150
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0143 - val_loss: 0.1625
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0139 - val_loss: 0.1954
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0135 - val_loss: 0.1814
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0130 - val_loss: 0.1927
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0170 - val_loss: 0.1417
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0147 - val_loss: 0.2023
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0317 - val_loss: 0.0290
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0155 - val_loss: 0.0422
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0150 - val_loss: 0.1434
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0186 - val_loss: 0.1289
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0155 - val_loss: 0.1615
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0152 - val_loss: 0.2015
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0158 - val_loss: 0.2163
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0147 - val_loss: 0.2628
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0167 - val_loss: 0.2092
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0161 - val_loss: 0.2919
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0310 - val_loss: 0.0275
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0269 - val_loss: 0.0690
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0824 - val_loss: 0.1512
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0381 - val_loss: 0.0237
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0225 - val_loss: 0.0288
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0269 - val_loss: 0.0405
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0392 - val_loss: 0.0346
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0321 - val_loss: 0.1002
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0227 - val_loss: 0.0436
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0142 - val_loss: 0.0288
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0488 - val_loss: 0.1005
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0339 - val_loss: 0.0213
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0203 - val_loss: 0.0266
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0207 - val_loss: 0.0556
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0154 - val_loss: 0.0116
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0146 - val_loss: 0.0243
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0254 - val_loss: 0.0237
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0128 - val_loss: 0.0509
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0118 - val_loss: 0.0623
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0208 - val_loss: 0.0285
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0152 - val_loss: 0.0727
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0120 - val_loss: 0.0999
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0198 - val_loss: 0.0440
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0120 - val_loss: 0.1050
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0153 - val_loss: 0.0682
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0129 - val_loss: 0.1059
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0235 - val_loss: 0.0436
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0120 - val_loss: 0.1220
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0122 - val_loss: 0.1125
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0144 - val_loss: 0.1102
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0159 - val_loss: 0.1364
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0159 - val_loss: 0.1539
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0139 - val_loss: 0.1796
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0160 - val_loss: 0.1338
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0137 - val_loss: 0.1848
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0219 - val_loss: 0.1372
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0133 - val_loss: 0.2317
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0148 - val_loss: 0.1673
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0135 - val_loss: 0.2200
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0330 - val_loss: 0.0155
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0194 - val_loss: 0.0965
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0123 - val_loss: 0.2300
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0176 - val_loss: 0.2089
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0187 - val_loss: 0.2760
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0190 - val_loss: 0.2698
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0236 - val_loss: 0.2496
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0633 - val_loss: 0.1169
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0336 - val_loss: 0.0184
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0452 - val_loss: 0.0790
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0336 - val_loss: 0.1445
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0329 - val_loss: 0.1632
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0374 - val_loss: 0.1611
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0533 - val_loss: 0.1172
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0466 - val_loss: 0.0334
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1552 - val_loss: 0.2269
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0325 - val_loss: 0.2530
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0496 - val_loss: 0.0173
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0467 - val_loss: 0.0786
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1222 - val_loss: 0.4681
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0290 - val_loss: 0.0246
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0401 - val_loss: 0.0456
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0396 - val_loss: 0.0273
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0297 - val_loss: 0.0475
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0302 - val_loss: 0.0272
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0426 - val_loss: 0.0471
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0408 - val_loss: 0.0339
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.2088 - val_loss: 0.2146
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0235 - val_loss: 0.0396
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0250 - val_loss: 0.0398
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1190 - val_loss: 0.1696
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0234 - val_loss: 0.0455
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0275 - val_loss: 0.0183
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1470 - val_loss: 0.1781
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0216 - val_loss: 0.0336
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0623 - val_loss: 0.1552
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0556 - val_loss: 0.1907
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0194 - val_loss: 0.0516
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0154 - val_loss: 0.0079
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0468 - val_loss: 0.1604
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0161 - val_loss: 0.0171
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0425 - val_loss: 0.1202
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0168 - val_loss: 0.0258
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0419 - val_loss: 0.1078
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0193 - val_loss: 0.0135
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0415 - val_loss: 0.0780
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0213 - val_loss: 0.0133
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0608 - val_loss: 0.0813
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.1545 - val_loss: 0.1599
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0473 - val_loss: 0.0912
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.1185 - val_loss: 0.1605
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0543 - val_loss: 0.1621
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0685 - val_loss: 0.1537
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0250 - val_loss: 0.0402
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0503 - val_loss: 0.0779
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0376 - val_loss: 0.0480
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0797 - val_loss: 0.1506
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0207 - val_loss: 0.0732
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0189 - val_loss: 0.0460
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0134 - val_loss: 0.0445
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0119 - val_loss: 0.0285
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0195 - val_loss: 0.0284
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0175 - val_loss: 0.0189
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0304 - val_loss: 0.0217
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0153 - val_loss: 0.0292
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0136 - val_loss: 0.0422
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0163 - val_loss: 0.0235
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0364 - val_loss: 0.0205
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0163 - val_loss: 0.0272
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0239 - val_loss: 0.0168
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0212 - val_loss: 0.0253
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0354 - val_loss: 0.0254
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0177 - val_loss: 0.0470
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0225 - val_loss: 0.0203
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0201 - val_loss: 0.0602
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0249 - val_loss: 0.0398
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0220 - val_loss: 0.0564
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0267 - val_loss: 0.0182
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0206 - val_loss: 0.0302
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0254 - val_loss: 0.0258
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0223 - val_loss: 0.0283
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0309 - val_loss: 0.0202
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0180 - val_loss: 0.0367
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0223 - val_loss: 0.0370
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0269 - val_loss: 0.0246
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0474 - val_loss: 0.0514
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0406 - val_loss: 0.0223
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0206 - val_loss: 0.0356
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0262 - val_loss: 0.0368
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0202 - val_loss: 0.0339
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0235 - val_loss: 0.0389
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0270 - val_loss: 0.0434
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0329 - val_loss: 0.0196
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0287 - val_loss: 0.0647
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0241 - val_loss: 0.0808
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0207 - val_loss: 0.0720
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0230 - val_loss: 0.0269
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0276 - val_loss: 0.0151
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0196 - val_loss: 0.0257
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0224 - val_loss: 0.0333
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0234 - val_loss: 0.0253
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0245 - val_loss: 0.0171
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0192 - val_loss: 0.0326
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0199 - val_loss: 0.0235
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0214 - val_loss: 0.0267
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0230 - val_loss: 0.0138
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0219 - val_loss: 0.0352
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0198 - val_loss: 0.0242
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0246 - val_loss: 0.0272
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0244 - val_loss: 0.0208
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0196 - val_loss: 0.0285
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0191 - val_loss: 0.0292
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0221 - val_loss: 0.0271
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0239 - val_loss: 0.0253
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0173 - val_loss: 0.0314
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0174 - val_loss: 0.0244
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0234 - val_loss: 0.0280
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0234 - val_loss: 0.0246
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0166 - val_loss: 0.0302
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0164 - val_loss: 0.0283
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0239 - val_loss: 0.0358
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0223 - val_loss: 0.0279
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0173 - val_loss: 0.0293
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0186 - val_loss: 0.0238
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0189 - val_loss: 0.0308
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0215 - val_loss: 0.0214
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0165 - val_loss: 0.0264
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0189 - val_loss: 0.0279
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0166 - val_loss: 0.0315
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0229 - val_loss: 0.0244
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0152 - val_loss: 0.0368
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0197 - val_loss: 0.0362
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0161 - val_loss: 0.0456
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0228 - val_loss: 0.0200
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0155 - val_loss: 0.0228
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0173 - val_loss: 0.0816
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0143 - val_loss: 0.1137
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0155 - val_loss: 0.0409
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0202 - val_loss: 0.0906
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0189 - val_loss: 0.0246
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0204 - val_loss: 0.0807
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0181 - val_loss: 0.0241
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0171 - val_loss: 0.0775
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0161 - val_loss: 0.0273
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0152 - val_loss: 0.0856
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0158 - val_loss: 0.0278
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0146 - val_loss: 0.0956
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0174 - val_loss: 0.0284
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0134 - val_loss: 0.0913
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0186 - val_loss: 0.0307
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0132 - val_loss: 0.0874
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0210 - val_loss: 0.0309
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0133 - val_loss: 0.1062
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0198 - val_loss: 0.0266
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0127 - val_loss: 0.0812
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0166 - val_loss: 0.0732
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0119 - val_loss: 0.1317
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0180 - val_loss: 0.0284
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0131 - val_loss: 0.0977
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0175 - val_loss: 0.0502
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0150 - val_loss: 0.1160
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0185 - val_loss: 0.0205
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0142 - val_loss: 0.0967
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0192 - val_loss: 0.0289
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0174 - val_loss: 0.0905
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0217 - val_loss: 0.0295
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0129 - val_loss: 0.0957
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0171 - val_loss: 0.0321
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0188 - val_loss: 0.0896
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0214 - val_loss: 0.0369
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0133 - val_loss: 0.0888
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0170 - val_loss: 0.0357
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0170 - val_loss: 0.1009
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0203 - val_loss: 0.0381
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0139 - val_loss: 0.0990
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0181 - val_loss: 0.0441
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0142 - val_loss: 0.1003
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0188 - val_loss: 0.0455
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0137 - val_loss: 0.1035
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0182 - val_loss: 0.0450
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0135 - val_loss: 0.1027
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0174 - val_loss: 0.0544
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0125 - val_loss: 0.1069
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0170 - val_loss: 0.0447
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0108 - val_loss: 0.1094
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0154 - val_loss: 0.0503
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0129 - val_loss: 0.1015
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0162 - val_loss: 0.0604
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0116 - val_loss: 0.1051
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0161 - val_loss: 0.0509
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0097 - val_loss: 0.1135
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0151 - val_loss: 0.0533
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0126 - val_loss: 0.1012
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0156 - val_loss: 0.0600
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0116 - val_loss: 0.1032
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0158 - val_loss: 0.0613
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0103 - val_loss: 0.1115
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0162 - val_loss: 0.0521
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0093 - val_loss: 0.1080
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0140 - val_loss: 0.0559
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0112 - val_loss: 0.1017
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0144 - val_loss: 0.0602
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0111 - val_loss: 0.1006
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0152 - val_loss: 0.0596
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0099 - val_loss: 0.1097
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0147 - val_loss: 0.0582
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0093 - val_loss: 0.1071
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0136 - val_loss: 0.0496
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0106 - val_loss: 0.0948
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0139 - val_loss: 0.0581
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0113 - val_loss: 0.1015
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0149 - val_loss: 0.0615
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0098 - val_loss: 0.1107
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0158 - val_loss: 0.0578
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0095 - val_loss: 0.1044
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0148 - val_loss: 0.0565
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0095 - val_loss: 0.1078
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0132 - val_loss: 0.0602
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0103 - val_loss: 0.1007
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0126 - val_loss: 0.0646
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0101 - val_loss: 0.1032
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0128 - val_loss: 0.0607
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0092 - val_loss: 0.1067
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0126 - val_loss: 0.0603
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0096 - val_loss: 0.1077
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0124 - val_loss: 0.0608
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0093 - val_loss: 0.1033
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0117 - val_loss: 0.0669
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0091 - val_loss: 0.1042
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0124 - val_loss: 0.0632
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0086 - val_loss: 0.1076
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0118 - val_loss: 0.0628
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0090 - val_loss: 0.1027
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0116 - val_loss: 0.0701
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0093 - val_loss: 0.1039
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0125 - val_loss: 0.0691
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0080 - val_loss: 0.1003
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0116 - val_loss: 0.0508
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0068 - val_loss: 0.1003
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0096 - val_loss: 0.0691
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0122 - val_loss: 0.0836
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0103 - val_loss: 0.0781
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0092 - val_loss: 0.0971
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0130 - val_loss: 0.0713
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0082 - val_loss: 0.0906
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0128 - val_loss: 0.0440
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0057 - val_loss: 0.0895
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0093 - val_loss: 0.0637
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0118 - val_loss: 0.0682
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0092 - val_loss: 0.0693
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0106 - val_loss: 0.0710
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0115 - val_loss: 0.0666
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0094 - val_loss: 0.0783
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0138 - val_loss: 0.0594
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0751
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0118 - val_loss: 0.0474
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0082 - val_loss: 0.0702
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0106 - val_loss: 0.0633
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0108 - val_loss: 0.0688
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0104 - val_loss: 0.0649
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0081 - val_loss: 0.0751
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0119 - val_loss: 0.0588
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0081 - val_loss: 0.0736
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0120 - val_loss: 0.0510
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0704
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0084 - val_loss: 0.0614
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0087 - val_loss: 0.0656
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0673
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0105 - val_loss: 0.0665
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0814
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0096 - val_loss: 0.0763
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0812
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0095 - val_loss: 0.0693
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0092 - val_loss: 0.0480
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0083 - val_loss: 0.0579
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0091 - val_loss: 0.0543
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0103 - val_loss: 0.0487
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0089 - val_loss: 0.0558
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0648
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0588
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0107 - val_loss: 0.0473
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0093 - val_loss: 0.0451
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0080 - val_loss: 0.0572
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0085 - val_loss: 0.0614
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0113 - val_loss: 0.0443
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0093 - val_loss: 0.0341
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0092 - val_loss: 0.0486
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0090 - val_loss: 0.0481
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0141 - val_loss: 0.0407
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0086 - val_loss: 0.0619
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0121 - val_loss: 0.0497
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0102 - val_loss: 0.0668
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0107 - val_loss: 0.0353
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0118 - val_loss: 0.0208
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0081 - val_loss: 0.0282
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0108 - val_loss: 0.0252
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0138 - val_loss: 0.0224
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0084 - val_loss: 0.0390
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0105 - val_loss: 0.0322
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0451
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0100 - val_loss: 0.0288
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0093 - val_loss: 0.0337
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0285
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0095 - val_loss: 0.0374
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0101 - val_loss: 0.0257
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0104 - val_loss: 0.0353
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0084 - val_loss: 0.0336
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0091 - val_loss: 0.0390
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0103 - val_loss: 0.0274
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0094 - val_loss: 0.0374
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0081 - val_loss: 0.0303
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0111 - val_loss: 0.0340
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0088 - val_loss: 0.0284
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0119 - val_loss: 0.0358
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0312
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0117 - val_loss: 0.0389
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0083 - val_loss: 0.0259
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0109 - val_loss: 0.0300
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0184
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0123 - val_loss: 0.0254
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0073 - val_loss: 0.0170
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0105 - val_loss: 0.0249
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0173
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0092 - val_loss: 0.0230
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0187
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0235
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0066 - val_loss: 0.0182
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0210
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0066 - val_loss: 0.0181
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0211
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0064 - val_loss: 0.0217
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0246
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0251
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0263
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0272
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0304
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0065 - val_loss: 0.0324
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0308
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0320
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0343
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0368
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0349
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0365
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0398
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0393
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0379
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0390
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0420
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0408
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0057 - val_loss: 0.0402
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0057 - val_loss: 0.0408
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0451
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0058 - val_loss: 0.0428
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0430
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0461
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0485
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0448
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0054 - val_loss: 0.0477
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0488
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0559
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0469
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0550
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0506
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0619
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0066 - val_loss: 0.0540
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0064 - val_loss: 0.0577
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0552
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0599
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0080 - val_loss: 0.0589
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0614
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0625
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0633
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0076 - val_loss: 0.0610
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0066 - val_loss: 0.0637
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0621
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0641
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0644
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0658
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0074 - val_loss: 0.0652
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0663
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0636
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0659
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0076 - val_loss: 0.0662
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0666
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0072 - val_loss: 0.0660
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0666
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0631
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0662
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0669
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0676
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0663
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0690
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0641
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0690
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0691
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0706
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0703
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0734
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0714
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0760
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0074 - val_loss: 0.0698
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0759
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0080 - val_loss: 0.0731
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0750
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0744
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0793
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0715
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0828
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0082 - val_loss: 0.0808
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0795
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0820
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0834
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0762
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0883
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0084 - val_loss: 0.0804
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0777
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0063 - val_loss: 0.0804
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0778
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0701
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0833
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0083 - val_loss: 0.0714
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0070 - val_loss: 0.0668
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0064 - val_loss: 0.0769
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0710
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0067 - val_loss: 0.0715
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0711
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0748
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0068 - val_loss: 0.0720
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0727
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0064 - val_loss: 0.0723
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0702
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0691
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0056 - val_loss: 0.0709
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0066 - val_loss: 0.0628
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0056 - val_loss: 0.0686
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0746
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0611
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0050 - val_loss: 0.0661
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0641
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0064 - val_loss: 0.0631
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0626
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0638
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0053 - val_loss: 0.0576
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0050 - val_loss: 0.0571
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0607
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0539
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0467
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0045 - val_loss: 0.0594
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0075 - val_loss: 0.0721
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0084 - val_loss: 0.0400
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0080 - val_loss: 0.0497
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0621
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0053 - val_loss: 0.0454
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0449
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0066 - val_loss: 0.0655
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0081 - val_loss: 0.0331
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0390
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0573
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0562
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0056 - val_loss: 0.0382
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0620
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0364
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0368
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0568
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0055 - val_loss: 0.0409
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0345
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0045 - val_loss: 0.0472
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0053 - val_loss: 0.0356
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0054 - val_loss: 0.0348
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0442
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0444
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0303
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0056 - val_loss: 0.0336
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0066 - val_loss: 0.0549
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0074 - val_loss: 0.0317
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0116 - val_loss: 0.0308
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0053 - val_loss: 0.0369
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0102 - val_loss: 0.0213
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0082 - val_loss: 0.0256
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0340
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0049 - val_loss: 0.0429
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0305
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0343
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0414
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0318
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0307
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0416
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0332
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0090 - val_loss: 0.0301
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0401
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0331
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0307
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0054 - val_loss: 0.0352
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0316
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0076 - val_loss: 0.0317
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0053 - val_loss: 0.0318
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0072 - val_loss: 0.0289
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0304
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0283
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0068 - val_loss: 0.0288
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0288
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0353
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0094 - val_loss: 0.0267
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0135 - val_loss: 0.0429
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0090 - val_loss: 0.0254
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0179 - val_loss: 0.0317
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0099 - val_loss: 0.0239
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0126 - val_loss: 0.0280
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0087 - val_loss: 0.0226
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0097 - val_loss: 0.0231
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0067 - val_loss: 0.0218
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0070 - val_loss: 0.0239
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0069 - val_loss: 0.0218
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0092 - val_loss: 0.0329
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0089 - val_loss: 0.0219
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0120 - val_loss: 0.0274
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0084 - val_loss: 0.0217
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0085 - val_loss: 0.0220
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0066 - val_loss: 0.0203
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0260
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0081 - val_loss: 0.0200
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0093 - val_loss: 0.0223
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0200
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0083 - val_loss: 0.0256
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0192
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0087 - val_loss: 0.0199
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0197
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0070 - val_loss: 0.0226
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0058 - val_loss: 0.0199
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0068 - val_loss: 0.0235
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0208
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0062 - val_loss: 0.0231
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0223
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0235
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0229
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0054 - val_loss: 0.0215
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0205
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0194
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0189
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0179
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0185
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0190
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0182
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0185
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0045 - val_loss: 0.0183
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0046 - val_loss: 0.0190
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0046 - val_loss: 0.0180
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0046 - val_loss: 0.0180
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0185
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0193
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0187
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0196
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0202
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0206
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0208
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0211
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0207
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0217
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0229
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0226
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0039 - val_loss: 0.0237
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0247
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0257
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0264
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0272
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0281
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0290
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0282
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0293
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0308
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0321
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0329
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0324
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0335
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0346
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0354
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0037 - val_loss: 0.0364
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0359
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0378
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0391
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0426
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0436
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0462
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0463
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0497
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0046 - val_loss: 0.0484
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0067 - val_loss: 0.0512
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0496
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0068 - val_loss: 0.0397
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0306
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0260
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0066 - val_loss: 0.0251
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0075 - val_loss: 0.0234
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0235
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0236
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0076 - val_loss: 0.0244
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0242
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0247
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0247
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0076 - val_loss: 0.0250
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0263
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0257
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0248
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0271
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0289
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0074 - val_loss: 0.0305
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0296
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0076 - val_loss: 0.0320
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0082 - val_loss: 0.0330
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0370
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0088 - val_loss: 0.0414
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0067 - val_loss: 0.0416
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0089 - val_loss: 0.0407
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0512
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0084 - val_loss: 0.0576
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0605
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0626
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0663
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0663
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0644
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0665
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0070 - val_loss: 0.0650
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0633
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0654
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0070 - val_loss: 0.0632
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0642
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0630
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0067 - val_loss: 0.0524
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0081 - val_loss: 0.0597
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0681
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0668
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0540
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0099 - val_loss: 0.0702
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0070 - val_loss: 0.0675
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0089 - val_loss: 0.0547
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0113 - val_loss: 0.0717
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0738
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0641
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0112 - val_loss: 0.0820
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0701
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0081 - val_loss: 0.0713
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0658
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0704
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0680
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0084 - val_loss: 0.0670
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0691
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0719
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0608
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0085 - val_loss: 0.0607
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0619
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0083 - val_loss: 0.0619
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0085 - val_loss: 0.0682
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0624
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0081 - val_loss: 0.0566
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0086 - val_loss: 0.0556
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0477
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0092 - val_loss: 0.0561
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0574
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0115 - val_loss: 0.0540
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0085 - val_loss: 0.0670
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0125 - val_loss: 0.0452
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0090 - val_loss: 0.0656
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0109 - val_loss: 0.0318
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0083 - val_loss: 0.0403
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0086 - val_loss: 0.0379
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0096 - val_loss: 0.0349
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0083 - val_loss: 0.0277
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0247
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0225
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0198
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0167
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0161
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0066 - val_loss: 0.0151
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0152
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0152
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0157
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0153
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0151
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0056 - val_loss: 0.0150
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0053 - val_loss: 0.0156
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0162
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0162
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0171
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0166
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0159
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0176
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0054 - val_loss: 0.0175
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0174
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0062 - val_loss: 0.0170
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0164
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0070 - val_loss: 0.0160
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0155
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0156
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0065 - val_loss: 0.0136
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0067 - val_loss: 0.0161
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0126
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0179
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0127
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0210
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0126
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0050 - val_loss: 0.0174
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0128
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0180
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0153
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0036 - val_loss: 0.0156
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0138
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0145
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0156
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0163
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0145
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0132
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0123
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0126
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0129
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0136
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0117
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0112
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0102
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0109
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0098
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0033 - val_loss: 0.0101
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0090
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0104
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0088
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0091
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0079
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0079
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0077
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0079
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0076
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0075
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0072
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0069
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0033 - val_loss: 0.0066
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0071
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0066
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0071
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0067
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0069
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0065
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0066
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0070
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0046 - val_loss: 0.0078
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0066
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0085
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0081
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0085 - val_loss: 0.0062
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0047 - val_loss: 0.0065
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0067 - val_loss: 0.0072
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0082
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0099 - val_loss: 0.0080
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0055
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0062
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0059
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0057
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0057
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0072
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0058
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0058
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0033 - val_loss: 0.0058
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0074
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0028 - val_loss: 0.0076
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0066
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0100
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0050
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0122 - val_loss: 0.0056
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0058
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0108
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0026 - val_loss: 0.0100
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0094 - val_loss: 0.0061
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0061
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0029 - val_loss: 0.0079
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0089
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0045 - val_loss: 0.0050
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0057 - val_loss: 0.0050
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0058
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0130
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0140
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0074 - val_loss: 0.0064
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0051
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0057
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0050 - val_loss: 0.0139
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0209
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0102
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0089 - val_loss: 0.0047
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0046 - val_loss: 0.0056
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0105
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0042 - val_loss: 0.0206
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0123 - val_loss: 0.0131
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0045
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0051
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0070
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0029 - val_loss: 0.0154
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0153
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0097 - val_loss: 0.0054
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0049
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0099
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0150
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0087 - val_loss: 0.0143
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0077 - val_loss: 0.0061
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0090
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0057 - val_loss: 0.0160
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0031 - val_loss: 0.0113
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0076 - val_loss: 0.0070
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0075
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0147
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0132
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0068 - val_loss: 0.0130
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0071
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0063 - val_loss: 0.0103
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0118
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0069 - val_loss: 0.0168
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0104
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0090 - val_loss: 0.0078
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0111
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0056 - val_loss: 0.0204
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0155
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0080 - val_loss: 0.0076
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0050 - val_loss: 0.0062
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0127
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0208
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0057 - val_loss: 0.0218
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0076 - val_loss: 0.0055
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0072
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0253
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0279
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0128 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0068 - val_loss: 0.0069
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0075
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0205
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0225
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0056 - val_loss: 0.0092
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0074 - val_loss: 0.0050
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0052 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0213
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0221
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0104
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0051
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0188
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0222
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0166
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0072
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0066
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0120
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0185
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0138
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0080
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0068
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0038 - val_loss: 0.0099
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0197
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0210
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0053 - val_loss: 0.0109
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0088
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0171
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0201
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0078
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0079 - val_loss: 0.0052
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0054
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0186
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0257
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0135 - val_loss: 0.0131
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0047
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0040 - val_loss: 0.0121
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0159
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0053 - val_loss: 0.0085
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0061 - val_loss: 0.0055
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0064
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0171
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0186
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0114
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0061
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0075
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0142
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0177
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0129
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0077
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0071
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0142
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0033 - val_loss: 0.0204
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0147
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0079
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0061
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0102
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0216
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0211
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0104
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0051
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0098
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0171
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0087 - val_loss: 0.0220
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0091
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0050
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0216
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0046 - val_loss: 0.0246
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0072 - val_loss: 0.0128
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0053 - val_loss: 0.0050
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0042 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0222
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0233
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0058 - val_loss: 0.0115
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0050
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0075
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0217
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0197
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0104
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0055 - val_loss: 0.0049
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0091
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0221
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0184
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0051 - val_loss: 0.0074
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0051
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0118
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0185
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0050 - val_loss: 0.0140
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0050
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0061
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0172
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0029 - val_loss: 0.0187
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0027 - val_loss: 0.0144
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0076
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0027 - val_loss: 0.0066
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0026 - val_loss: 0.0114
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0024 - val_loss: 0.0156
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0024 - val_loss: 0.0135
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0077
Train on 29 samples, validate on 13 samples
Epoch 1/1

```

```

- 0s - loss: 0.0027 - val_loss: 0.0067
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0099
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0027 - val_loss: 0.0164
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0022 - val_loss: 0.0160
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0088
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0052
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0106
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0164
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0073 - val_loss: 0.0203
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0072
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0029 - val_loss: 0.0181
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0024 - val_loss: 0.0202
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0117
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0059
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0029 - val_loss: 0.0077
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0027 - val_loss: 0.0141
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0028 - val_loss: 0.0194
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0120
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0029 - val_loss: 0.0065
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0127
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0027 - val_loss: 0.0170
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0028 - val_loss: 0.0136
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0029 - val_loss: 0.0067
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0062
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0029 - val_loss: 0.0091
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0180
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0153
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0055
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0047 - val_loss: 0.0124
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0143
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0051 - val_loss: 0.0170
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0045 - val_loss: 0.0058
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0060
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0102
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0208
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0027 - val_loss: 0.0129
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0062
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0058
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0029 - val_loss: 0.0090
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0157
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0024 - val_loss: 0.0129
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0028 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0026 - val_loss: 0.0064
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0088
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0022 - val_loss: 0.0129
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0019 - val_loss: 0.0112
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0083
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0071
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0091
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0107
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0131
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0026 - val_loss: 0.0085
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0083
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0065
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0049 - val_loss: 0.0128
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0022 - val_loss: 0.0101
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0020 - val_loss: 0.0089
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0026 - val_loss: 0.0069
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0074
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0119
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0020 - val_loss: 0.0116
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0028 - val_loss: 0.0089
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0028 - val_loss: 0.0059
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0073
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0111
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0038 - val_loss: 0.0155
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0071
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0054
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0064
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0129
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0167
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0068
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0054
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0062
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0134
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0146
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0056 - val_loss: 0.0056
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0095
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0124
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0119
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0054
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0068
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0020 - val_loss: 0.0102
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0121
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0028 - val_loss: 0.0068
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0022 - val_loss: 0.0057
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0094
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0021 - val_loss: 0.0086
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0095
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0051
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0027 - val_loss: 0.0082
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0021 - val_loss: 0.0111
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0018 - val_loss: 0.0084
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0026 - val_loss: 0.0065
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0022 - val_loss: 0.0065
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0122
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0065
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0022 - val_loss: 0.0058
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0055
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0112
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0028 - val_loss: 0.0129
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0040 - val_loss: 0.0051
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0064
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0026 - val_loss: 0.0113
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0020 - val_loss: 0.0093
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0058
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0023 - val_loss: 0.0052
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0104
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0021 - val_loss: 0.0084
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0070
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0057
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0105
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0023 - val_loss: 0.0081
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0017 - val_loss: 0.0081
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0056
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0025 - val_loss: 0.0086
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0125
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0078 - val_loss: 0.0045
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0059 - val_loss: 0.0082
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0047
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0046 - val_loss: 0.0110
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0056 - val_loss: 0.0106
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0039 - val_loss: 0.0048
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0033 - val_loss: 0.0062
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0024 - val_loss: 0.0062
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0126
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0048 - val_loss: 0.0087
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0046
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0035 - val_loss: 0.0079
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0028 - val_loss: 0.0090
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0015 - val_loss: 0.0084
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0047 - val_loss: 0.0080
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0037 - val_loss: 0.0047
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0045 - val_loss: 0.0099
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0080
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0015 - val_loss: 0.0066
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0086
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0048
Train on 29 samples, validate on 13 samples
Epoch 1/1

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- 0s - loss: 0.0047 - val_loss: 0.0091
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0060
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0017 - val_loss: 0.0065
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0075 - val_loss: 0.0093
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0041 - val_loss: 0.0047
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0039 - val_loss: 0.0078
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0044 - val_loss: 0.0064
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0019 - val_loss: 0.0054
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0071 - val_loss: 0.0094
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0043 - val_loss: 0.0047
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0030 - val_loss: 0.0067
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0052 - val_loss: 0.0069
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0036 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0031 - val_loss: 0.0077
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0022 - val_loss: 0.0055
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0020 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1

```



```

- 0s - loss: 0.0031 - val_loss: 0.0066
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0022 - val_loss: 0.0053
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0032 - val_loss: 0.0063
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0034 - val_loss: 0.0050
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0026 - val_loss: 0.0056
Train on 29 samples, validate on 13 samples
Epoch 1/1
- 0s - loss: 0.0060 - val_loss: 0.0073

```

```

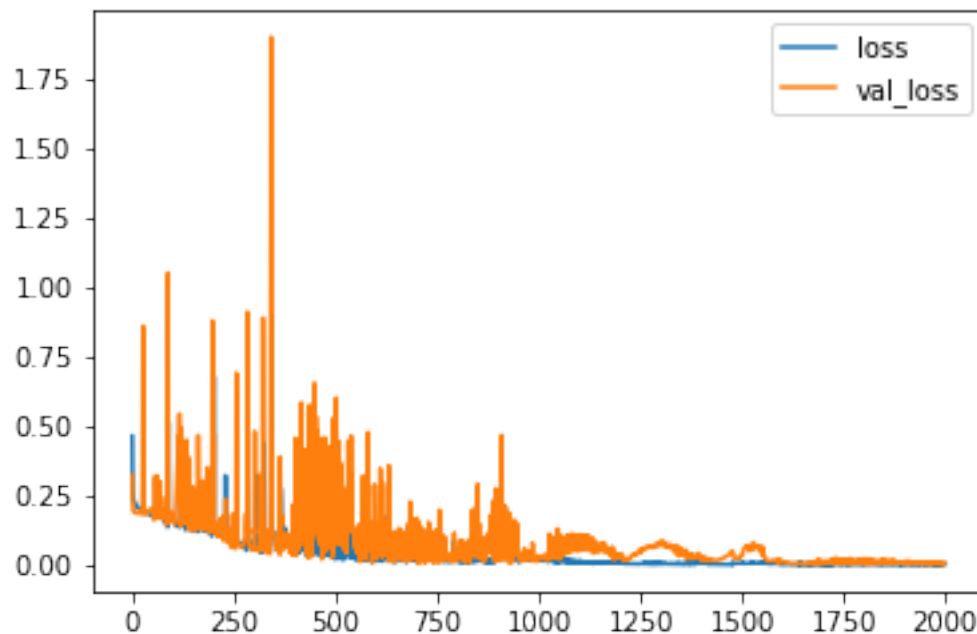
In [12]: #loss
         loss_df = pd.DataFrame([log_loss, log_val_loss]).T
         loss_df.columns = ["loss", "val_loss"]
         loss_df.plot()

```

```

Out[12]: <matplotlib.axes._subplots.AxesSubplot at 0x11baa0438>

```



```

In [13]: #validation
         print(np.argsort(log_val_loss[log_val_loss > 0])[0])

```

```

print(np.argsort(log_loss)[0])
best_model = models[np.argsort(log_val_loss[log_val_loss > 0])[0]].model

```

1957  
1970

```

In [14]: #
def pred_by_pred_data(model, X, time):
    model.reset_states()

    prediction_train = np.zeros(len(X))
    prediction = np.zeros(time)

    #train
    for i in range(len(X)):
        prediction_train[i] = model.predict(X[i].reshape(1,-1,1))[0][0][0]

    #
    tmp = X[len(X) - 1, :, :].reshape(1,-1,1)[0, 1:, 0]
    tmp = np.append(tmp, prediction_train[len(X) - 1]).reshape(1,-1,1)

    #
    for i in range(time):
        prediction[i] = model.predict(tmp)[0][0][0]

        #
        tmp = tmp[0, 1:, 0]
        tmp = np.append(tmp, prediction[i]).reshape(1,-1,1)

    model.reset_states()

    return np.hstack((prediction_train, prediction))

```

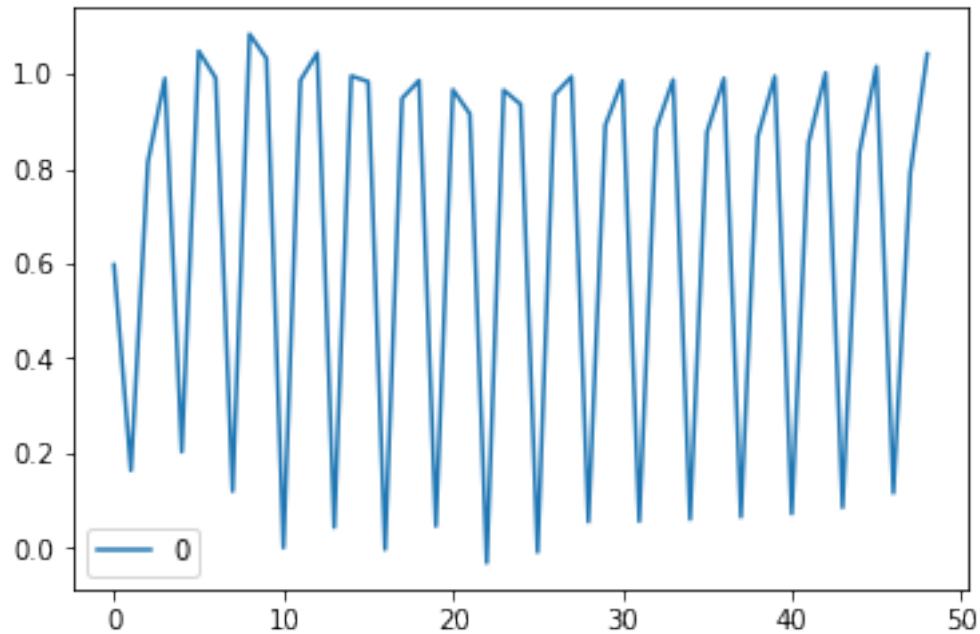
```

In [15]: #
predicted = pred_by_pred_data(best_model, X_train_c, 20)
predicted = pd.DataFrame(predicted)
print(predicted.shape)
predicted.plot()

```

(49, 1)

Out[15]: <matplotlib.axes.\_subplots.AxesSubplot at 0x11badb1d0>



```
In [16]: #
predicted_inv = sclr_x.inverse_transform(np.array(predicted).reshape(-1, 1))
predicted_inv = inv_diff(passenger, predicted_inv, 1)
predicted_inv = pd.DataFrame(predicted_inv)

passenger = pd.DataFrame(passenger )

def input_data(weight, time):
    if (weight > 100 and time >10):
        return 1.005
    else:
        return 0.995

x1 = input_data(150,11)
predicted_max = predicted_inv[:]
predicted_max *= x1
predicted_max = pd.DataFrame(predicted_max)

x2 = input_data(90,9)
predicted_min = predicted_inv[:]
predicted_min *= x2
predicted_min = pd.DataFrame(predicted_min)

#
#df_viz = pd.concat([predicted_inv, predicted_max,pd.DataFrame(passenger)], axis = 1)
#df_viz.columns = ["y_ave", "y_max", "y"]
```

```

#df_viz.plot()

plt.plot( predicted_inv , label = "y_ave")
plt.plot( predicted_max, label = "y_max")

plt.plot( predicted_min, label = "y_min")
plt.plot(passenger, label= "test")
plt.title("chain_predict")
plt.legend() #

plt.savefig('chain_predict.png')

```

