

untitled3

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[ ]: import numpy as np
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import MinMaxScaler
from keras.models import Sequential
from keras.layers import Conv1D, MaxPooling1D, Flatten, Dense

# Load your dataset (assuming it's a CSV file)
data = pd.read_csv('stock_data.csv')

# Preprocess your data
scaler = MinMaxScaler()
scaled_data = scaler.fit_transform(data)

# Split data into input features and target variable
X = scaled_data[:, :-1] # Input features
y = scaled_data[:, -1]  # Target variable (movement)

# Reshape input features for CNN
X = X.reshape(X.shape[0], X.shape[1], 1)

# Split data into train and test sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2,
    random_state=42)

# Define the CNN model
model = Sequential()
model.add(Conv1D(filters=64, kernel_size=3, activation='relu',
    input_shape=(X_train.shape[1], 1)))
model.add(MaxPooling1D(pool_size=2))
model.add(Flatten())
model.add(Dense(50, activation='relu'))
model.add(Dense(1, activation='sigmoid'))

# Compile the model
model.compile(optimizer='adam', loss='binary_crossentropy',
    metrics=['accuracy'])
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# Train the model
model.fit(X_train, y_train, epochs=10, batch_size=32, validation_data=(X_test,
↪y_test))

# Evaluate the model
accuracy = model.evaluate(X_test, y_test)[1]
print("Accuracy:", accuracy)
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