# **Models Trained with their respective parameters and metrics.**

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| Model Name | Parameters and Hyper Parameters | Metrics |
| CNN\_LSTM | model = Sequential()      # TimeDistributed wrapper to apply CNN across time dimension      model.add(TimeDistributed(Conv2D(32, (3, 3), activation='relu'), input\_shape=input\_shape))      model.add(TimeDistributed(MaxPooling2D((2, 2))))      model.add(TimeDistributed(Conv2D(64, (3, 3), activation='relu')))      model.add(TimeDistributed(MaxPooling2D((2, 2))))      model.add(TimeDistributed(Flatten()))      # LSTM layer for temporal processing      model.add(LSTM(50, return\_sequences=False))      # Fully connected layers      model.add(Dense(100, activation='relu'))      model.add(Dropout(0.5))      model.add(Dense(1, activation='sigmoid'))        # Compile the model      model.compile(optimizer=Adam(),                loss='binary\_crossentropy',                metrics=['accuracy']) | Accuracy: 85%  Loss: 0.4  [Best] |
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