Q3. Short Video Classification

Just run the jupyter notebook of `Q3.ipynb`. It uses the given dataset. The program has one output file: * Q3_output.csv.

a. extract frames from a video as training data

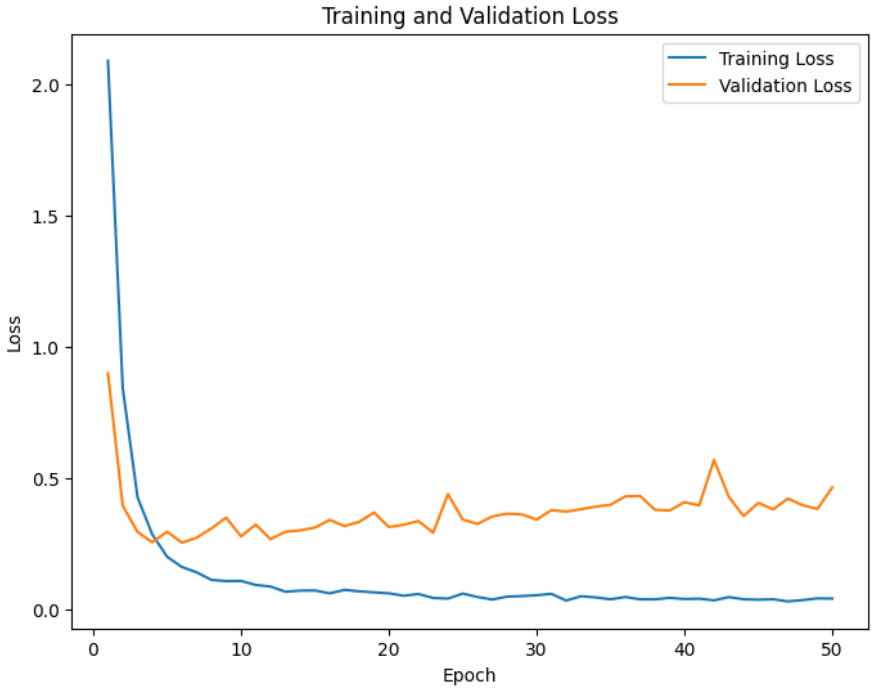
b. model

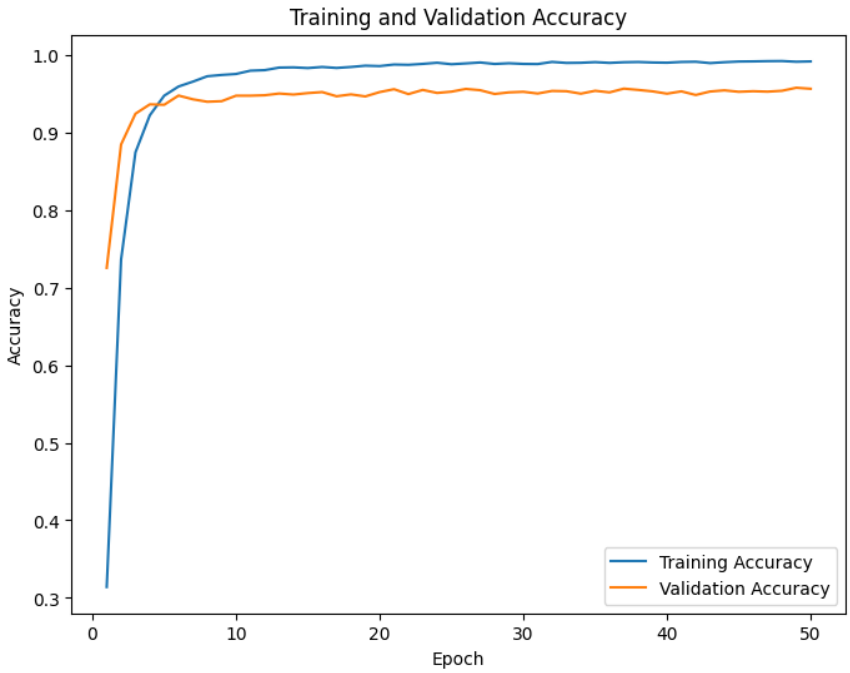
train the model on VGG16(base)

model structure

```
#定义结构
model = Sequential()
model.add(Dense(1024, activation='relu', input_shape=(25088,)))
model.add(Dropout(0.5))
model.add(Dense(512, activation='relu'))
model.add(Dropout(0.5))
model.add(Dense(256, activation='relu'))
model.add(Dropout(0.5))
model.add(Dense(128, activation='relu'))
model.add(Dropout(0.5))
model.add(Dense(64, activation='relu'))
model.add(Dropout(0.5))
model.add(Dense(15, activation='softmax'))
```

Evaluation:






```
Training Accuracy: 0.9915336966514587
Validation Accuracy: 0.9562790989875793
```

c. Predict the model
   Pick mode as the label