

L.A. Care Job Interview

Eric Laszlo

22 Oct 19

Table of Contents

1 Introduction

2 Source Code

- The Model
- The View
- The Presenter
- Further Reading

3 Deployment

Introduction

Application on Google Cloud

<https://la-care-presentation.appspot.com>

Table of Contents

1 Introduction

2 Source Code

- The Model
- The View
- The Presenter
- Further Reading

3 Deployment

You can download the code from

- <https://github.com/ericlaszlo/la-care-application>

Source Code: The Model

The first convolutional layer:

```
model = Sequential()  
model.add(Conv2D(32, (5,5),  
                padding='same',  
                activation='relu',  
                input_shape=[28,28,1]))  
model.add(Conv2D(32, (5,5),  
                padding='same',  
                activation='relu'))  
model.add(MaxPooling2D(pool_size=(2,2)))  
model.add(Dropout(0.25))
```

The second layer is convolutional:

```
model.add(Conv2D(64, (3,3),  
                padding='same',  
                activation='relu'))  
model.add(Conv2D(64, (3,3),  
                padding='same',  
                activation='relu'))  
model.add(MaxPooling2D(pool_size=(2,2),  
                       strides=(2,2)))  
model.add(Dropout(0.25))
```

The final, fully connected layers:

```
model.add(Flatten())  
model.add(Dense(128, activation='relu'))  
model.add(Dropout(0.5))  
model.add(Dense(10, activation='softmax'))
```


Source Code: The Model

- Adam (batch size of 128, and 20 epochs)
- Crossentropy loss function
- Accuracy

Jinja2 base template for all the views:

```
<html>
  <head>
    <!-- Stuff here omitted... -->
  </head>
  {% block body %}{% endblock %}

  {% block localscripts %}{% endblock %}
</html>
```

Extend the base template with HTML for the prediction:

```
{% extends "base.html" %}
{% block body %}
    <body onload="init()">
        <!-- Omitted to save space ... -->
    </body>
{% endblock %}

{% block localscripts %}
    <script>
        <!-- Omitted, again ... -->
    </script>
{% endblock %}
```

```
@BP.route('/background_process',  
          methods=['POST', 'GET'])  
def background_process():  
  
    # Stuff ommited for clarity...  
  
    return jsonify({  
        'prediction': prediction,  
        'score': score  
    })
```

From the on-line documentation:

- <https://flask.palletsprojects.com/en/1.1.x/tutorial/>

The Mega Tutorial:

- <https://blog.miguelgrinberg.com/post/the-flask-mega-tutorial-part-i-hello-world>

Table of Contents

1 Introduction

2 Source Code

- The Model
- The View
- The Presenter
- Further Reading

3 Deployment

Deployment to GCP is easy!

Questions?