COMP-SCI 5542 (SP17) - Big Data Analytics and Applications

Tutorial 10 Assignment (Due 04/05/17 by 11:59 PM)

***Dayu Wang* (45)**

1. TensorFlow Programming

1.1. Dataset

In my dataset, I have three folders: `smile`, `cry`, and `angry`. Each folder has more than 30 related emoticons (emoji impressions).

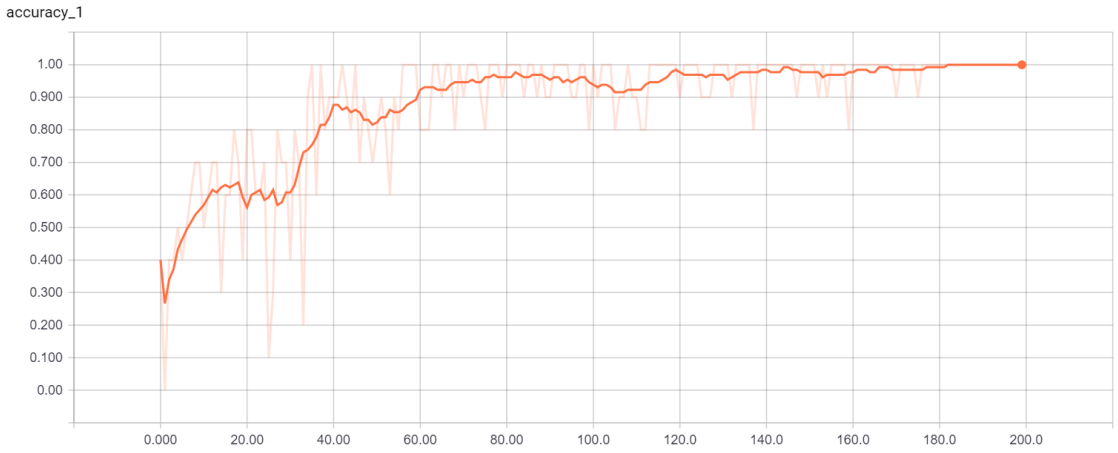
1.2. Accuracies

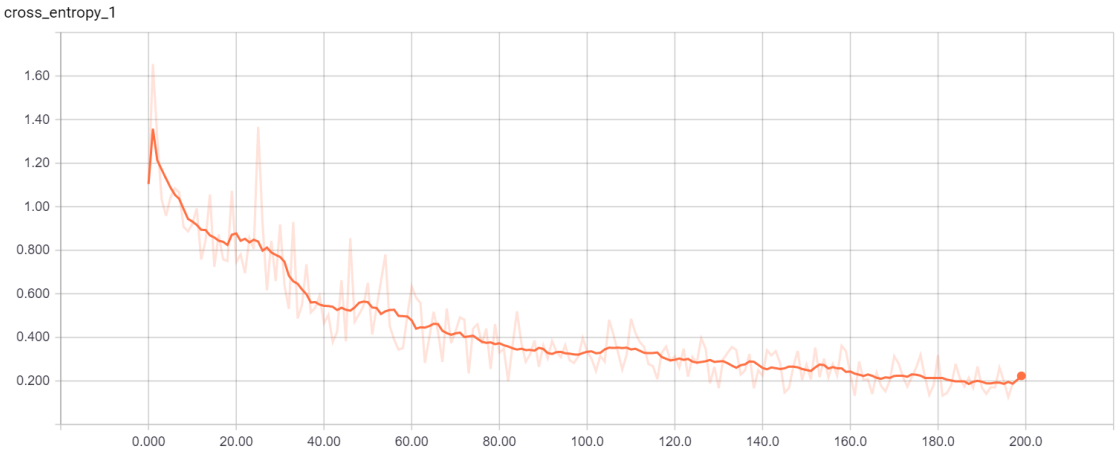
```
2017-04-05 16:49:47.252464: Step 0: Train accuracy = 60.0%
2017-04-05 16:49:47.253463: Step 0: Cross entropy = 0.806461
2017-04-05 16:49:47.539238: Step 0: Validation accuracy = 36.0% (N=100)
2017-04-05 16:49:48.415452: Step 10: Train accuracy = 100.0%
2017-04-05 16:49:48.415452: Step 10: Cross entropy = 0.751799
2017-04-05 16:49:48.678139: Step 10: Validation accuracy = 37.0% (N=100)
2017-04-05 16:49:49.043402: Step 20: Train accuracy = 90.0%
2017-04-05 16:49:49.043402: Step 20: Cross entropy = 0.603976
2017-04-05 16:49:49.207535: Step 20: Validation accuracy = 69.0% (N=100)
2017-04-05 16:49:49.458197: Step 30: Train accuracy = 80.0%
2017-04-05 16:49:49.458197: Step 30: Cross entropy = 0.594302
2017-04-05 16:49:49.624317: Step 30: Validation accuracy = 43.0% (N=100)
2017-04-05 16:49:49.846225: Step 40: Train accuracy = 90.0%
2017-04-05 16:49:49.846225: Step 40: Cross entropy = 0.554903
2017-04-05 16:49:49.986825: Step 40: Validation accuracy = 54.0% (N=100)
2017-04-05 16:49:50.191023: Step 50: Train accuracy = 90.0%
2017-04-05 16:49:50.191023: Step 50: Cross entropy = 0.628171
2017-04-05 16:49:50.330642: Step 50: Validation accuracy = 67.0% (N=100)
2017-04-05 16:49:50.531329: Step 60: Train accuracy = 100.0%
2017-04-05 16:49:50.531848: Step 60: Cross entropy = 0.438464
2017-04-05 16:49:50.672429: Step 60: Validation accuracy = 70.0% (N=100)
2017-04-05 16:49:50.869069: Step 70: Train accuracy = 100.0%
2017-04-05 16:49:50.869069: Step 70: Cross entropy = 0.386778
2017-04-05 16:49:51.031687: Step 70: Validation accuracy = 82.0% (N=100)
2017-04-05 16:49:51.248339: Step 80: Train accuracy = 100.0%
2017-04-05 16:49:51.248339: Step 80: Cross entropy = 0.270075
2017-04-05 16:49:51.439975: Step 80: Validation accuracy = 36.0% (N=100)
2017-04-05 16:49:51.657326: Step 90: Train accuracy = 100.0%
2017-04-05 16:49:51.657824: Step 90: Cross entropy = 0.309137
2017-04-05 16:49:51.817938: Step 90: Validation accuracy = 80.0% (N=100)
```

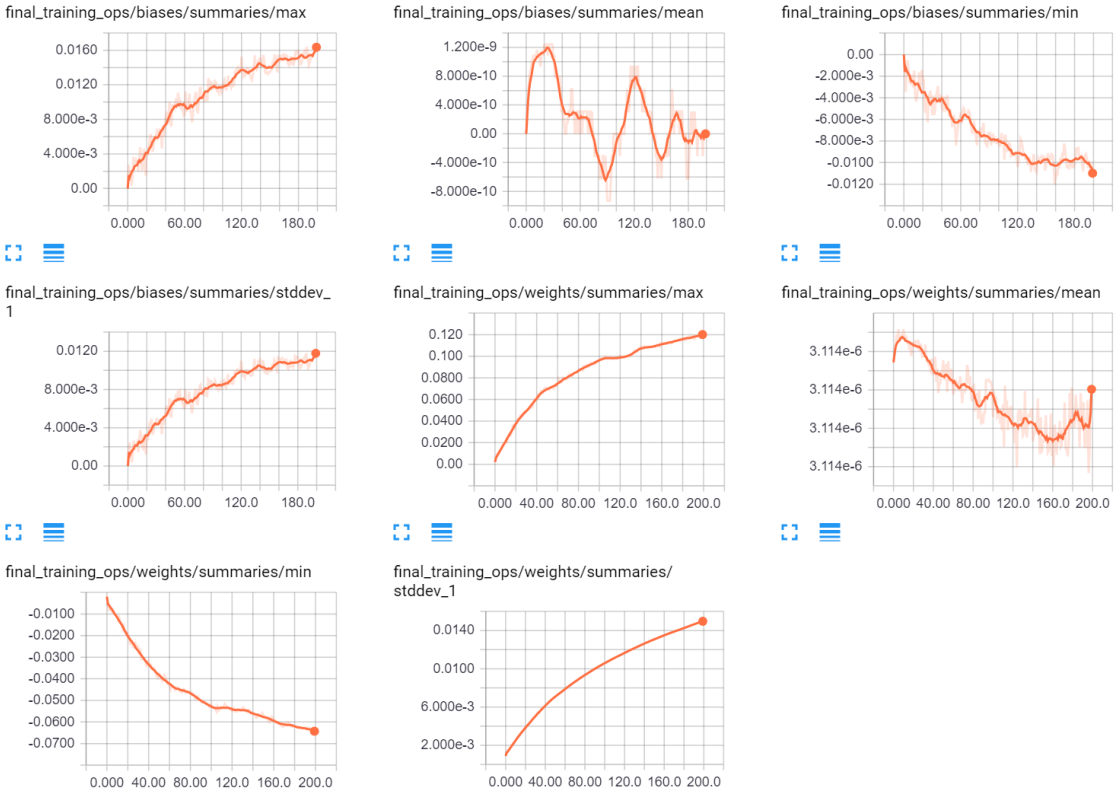
```
2017-04-05 16:49:52.029312: Step 100: Train accuracy = 100.0%
2017-04-05 16:49:52.029312: Step 100: Cross entropy = 0.333613
2017-04-05 16:49:52.174419: Step 100: Validation accuracy = 68.0% (N=100)
2017-04-05 16:49:52.389571: Step 110: Train accuracy = 100.0%
2017-04-05 16:49:52.390091: Step 110: Cross entropy = 0.282906
2017-04-05 16:49:52.544681: Step 110: Validation accuracy = 37.0% (N=100)
2017-04-05 16:49:52.748549: Step 120: Train accuracy = 100.0%
2017-04-05 16:49:52.748549: Step 120: Cross entropy = 0.315017
2017-04-05 16:49:52.896654: Step 120: Validation accuracy = 67.0% (N=100)
2017-04-05 16:49:53.093795: Step 130: Train accuracy = 100.0%
2017-04-05 16:49:53.093795: Step 130: Cross entropy = 0.365672
2017-04-05 16:49:53.237379: Step 130: Validation accuracy = 88.0% (N=100)
2017-04-05 16:49:53.500065: Step 140: Train accuracy = 100.0%
2017-04-05 16:49:53.500065: Step 140: Cross entropy = 0.264272
2017-04-05 16:49:53.697205: Step 140: Validation accuracy = 67.0% (N=100)
2017-04-05 16:49:53.910141: Step 150: Train accuracy = 100.0%
2017-04-05 16:49:53.910141: Step 150: Cross entropy = 0.218194
2017-04-05 16:49:54.058729: Step 150: Validation accuracy = 69.0% (N=100)
2017-04-05 16:49:54.319419: Step 160: Train accuracy = 100.0%
2017-04-05 16:49:54.319419: Step 160: Cross entropy = 0.177432
2017-04-05 16:49:54.466023: Step 160: Validation accuracy = 77.0% (N=100)
2017-04-05 16:49:54.661916: Step 170: Train accuracy = 100.0%
2017-04-05 16:49:54.661916: Step 170: Cross entropy = 0.172528
2017-04-05 16:49:54.816007: Step 170: Validation accuracy = 72.0% (N=100)
2017-04-05 16:49:55.014832: Step 180: Train accuracy = 100.0%
2017-04-05 16:49:55.014832: Step 180: Cross entropy = 0.216906
2017-04-05 16:49:55.151427: Step 180: Validation accuracy = 81.0% (N=100)
2017-04-05 16:49:55.358575: Step 190: Train accuracy = 100.0%
2017-04-05 16:49:55.358575: Step 190: Cross entropy = 0.148927
2017-04-05 16:49:55.514187: Step 190: Validation accuracy = 67.0% (N=100)
2017-04-05 16:49:55.700189: Step 199: Train accuracy = 100.0%
2017-04-05 16:49:55.700189: Step 199: Cross entropy = 0.182127
2017-04-05 16:49:55.845310: Step 199: Validation accuracy = 66.0% (N=100)
Final test accuracy = 66.7% (N=30)
```

1.3. TensorBoard Screenshots

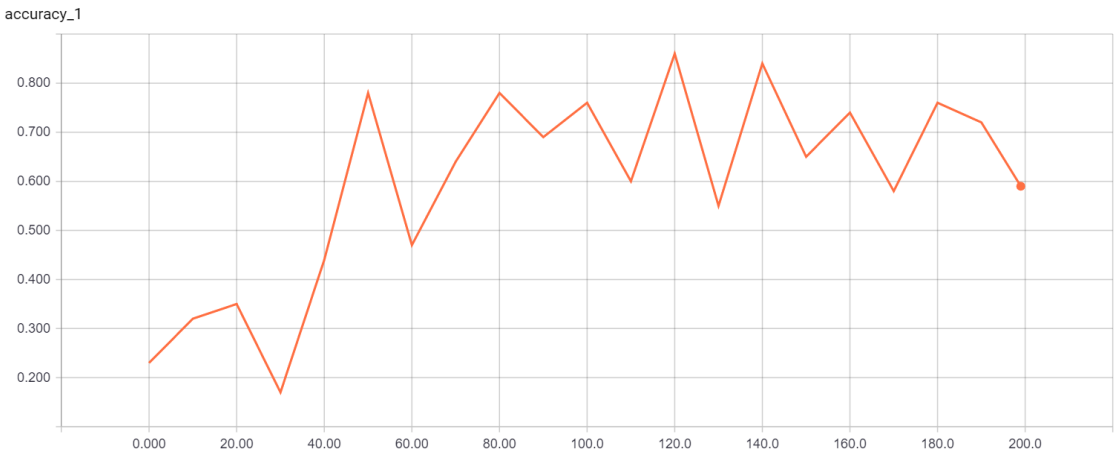
1.3.1. Training



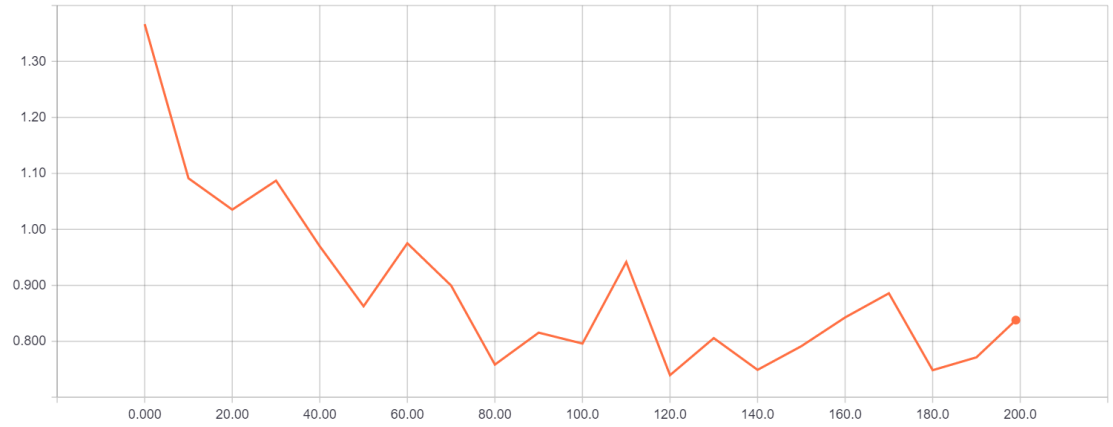




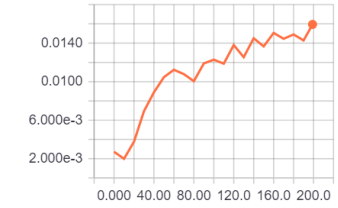
1.3.2. Validation



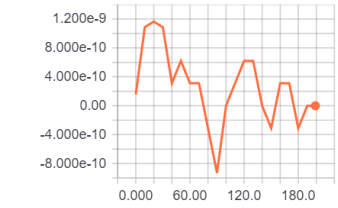
cross_entropy_1



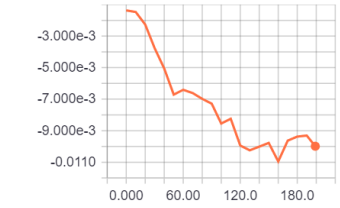
final_training_ops/biases/summaries/max



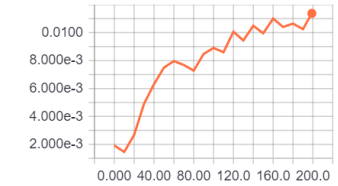
final_training_ops/biases/summaries/mean



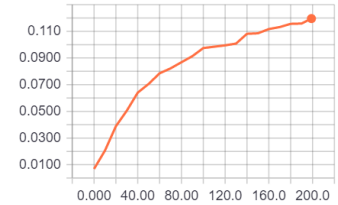
final_training_ops/biases/summaries/min



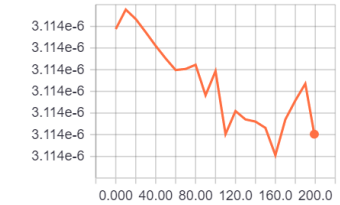
final_training_ops/biases/summaries/stddev_1



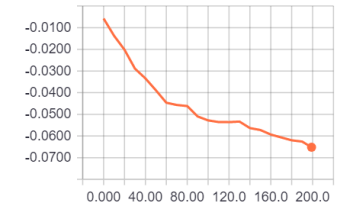
final_training_ops/weights/summaries/max



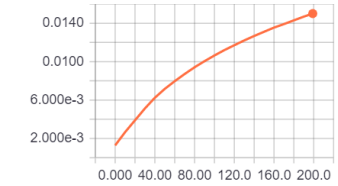
final_training_ops/weights/summaries/mean



final_training_ops/weights/summaries/min

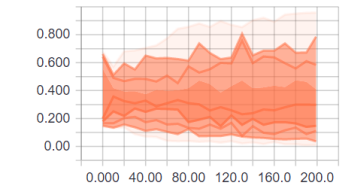


final_training_ops/weights/summaries/stddev_1



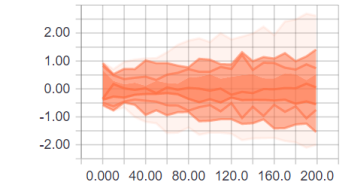
activations

activations
C\.

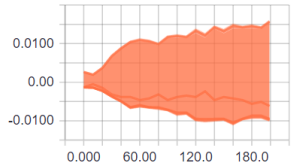


final_training_ops

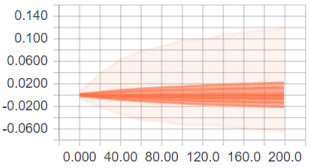
final_training_ops/Wx_plus_b/pre_activations
C\.



final_training_ops/biases/summaries/
histogram
C\.

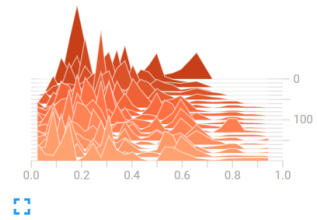


final_training_ops/weights/summaries/
histogram
C\.



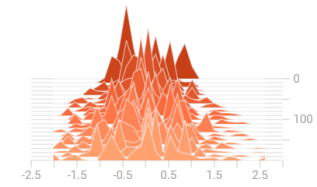
activations

activations
C\.

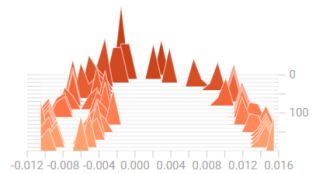


final_training_ops

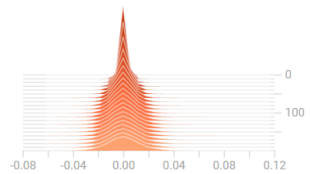
final_training_ops/Wx_plus_b/pre_activations
C\.



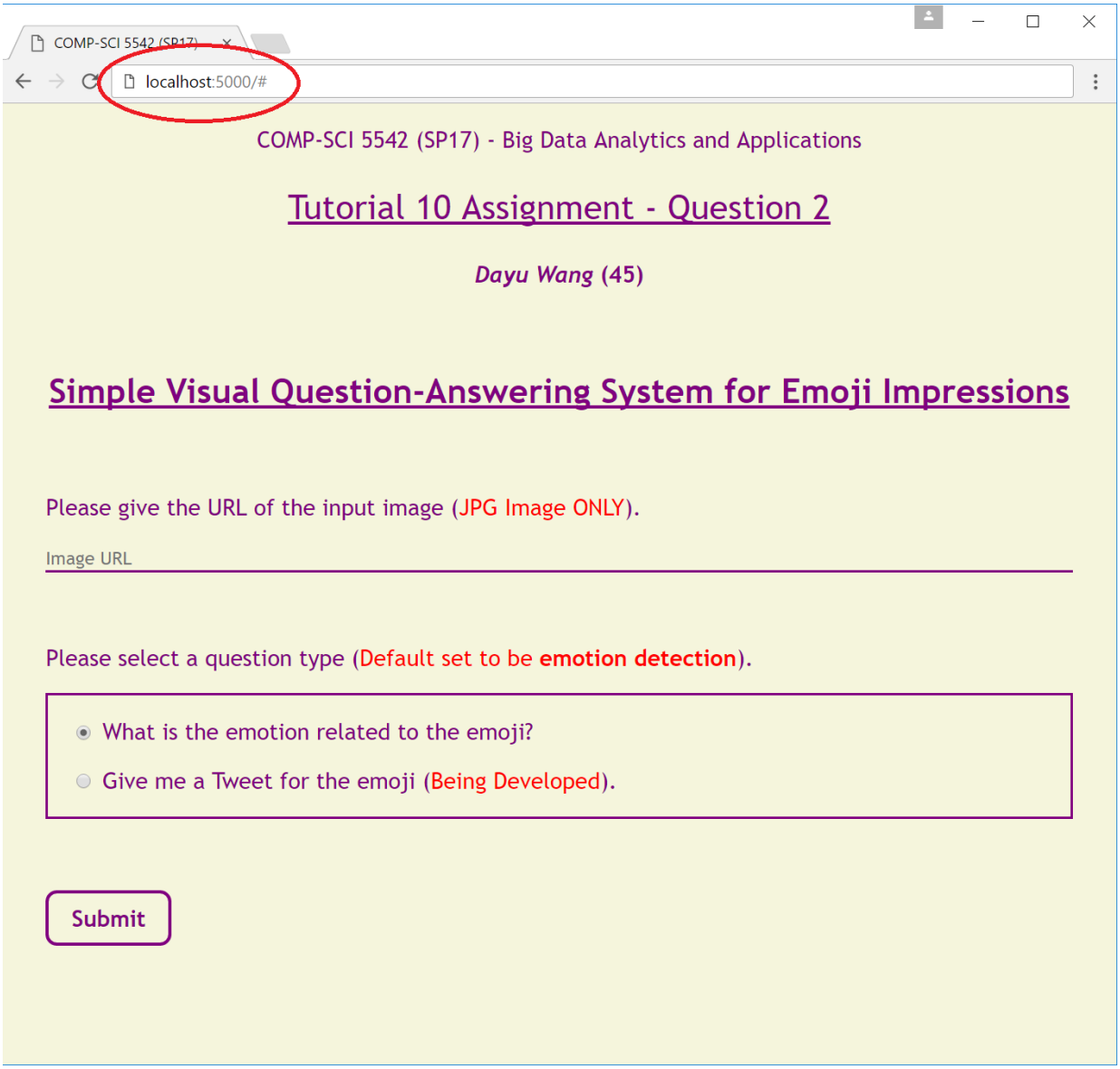
final_training_ops/biases/summaries/
histogram
C\.

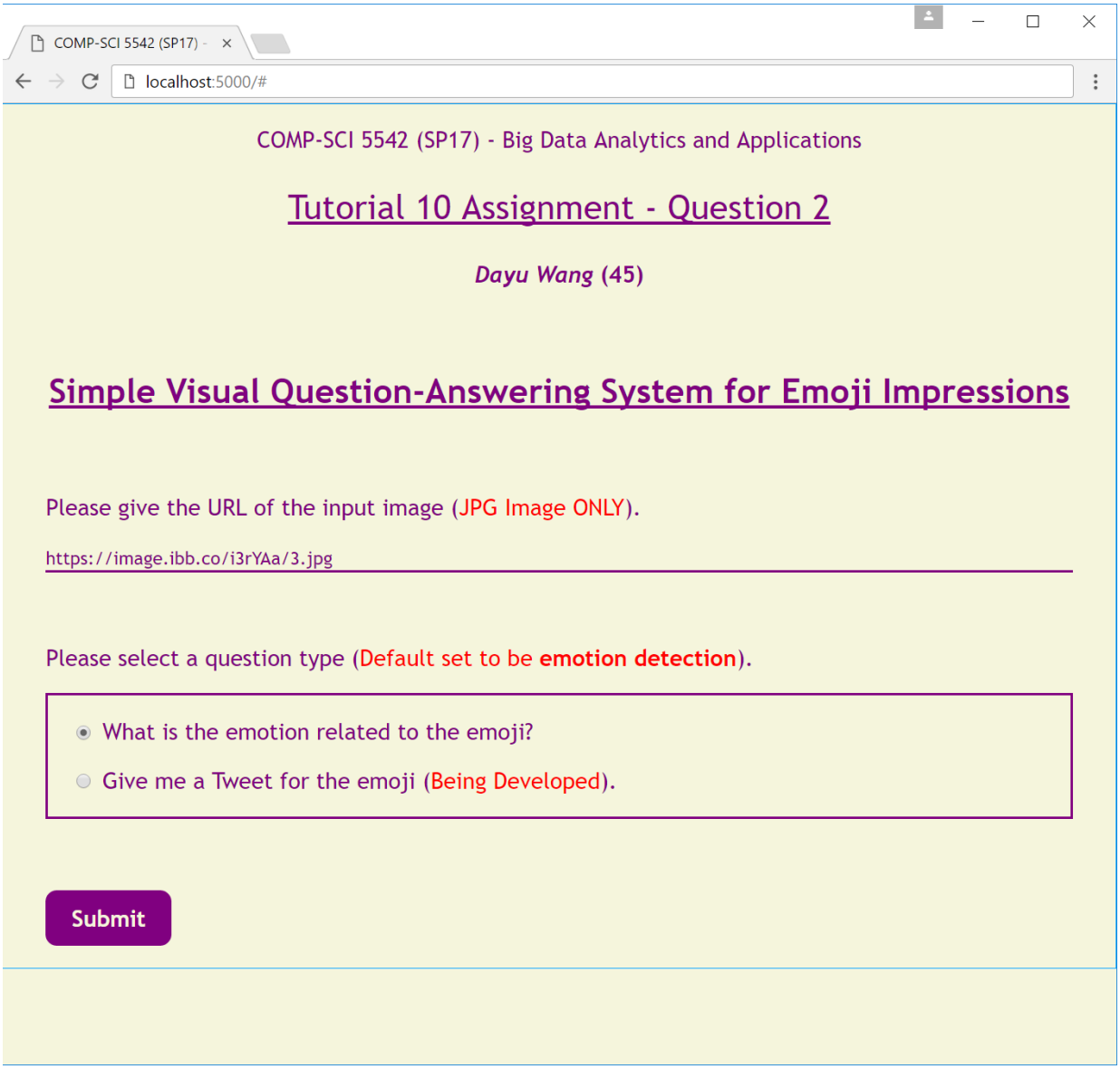


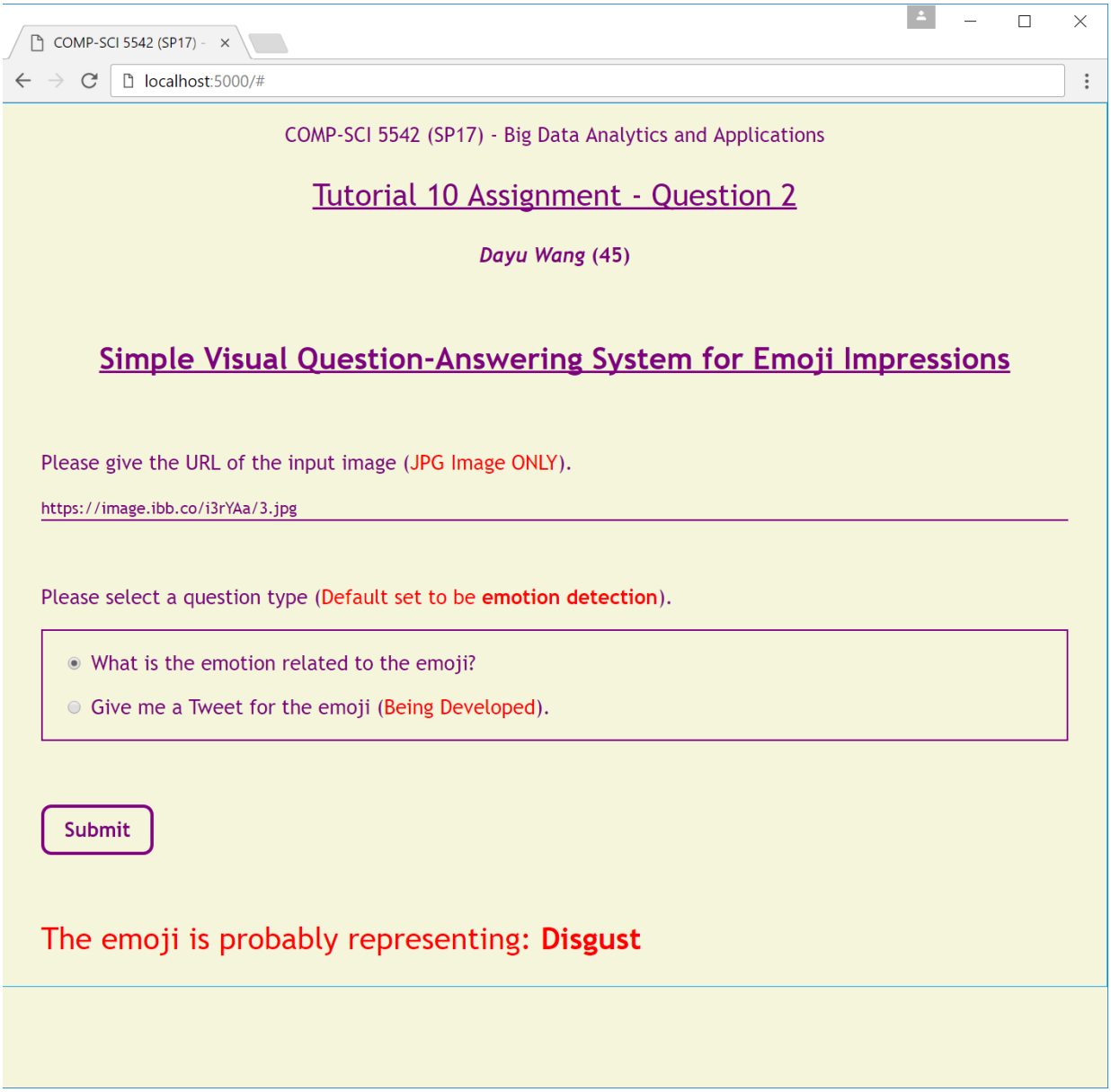
final_training_ops/weights/summaries/
histogram
C\.



2. Web Application (Screenshots)




COMP-SCI 5542 (SP17) -
localhost:5000/#
COMP-SCI 5542 (SP17) - Big Data Analytics and Applications
Tutorial 10 Assignment - Question 2
Dayu Wang (45)
Simple Visual Question-Answering System for Emoji Impressions
Please give the URL of the input image (JPG Image ONLY).
https://image.ibb.co/i3rYAa/3.jpg
Please select a question type (Default set to be emotion detection).
What is the emotion related to the emoji?
Give me a Tweet for the emoji (Being Developed).
Submit


COMP-SCI 5542 (SP17) -
localhost:5000/#
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Please give the URL of the input image (JPG Image ONLY).
https://image.ibb.co/i3rYAa/3.jpg
Please select a question type (Default set to be **emotion detection**).
What is the emotion related to the emoji?
Give me a Tweet for the emoji (Being Developed).
Submit
The emoji is probably representing: **Disgust**