Hot Dog Detector

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Specifications of The Model and Training Process

- Convolutional Neural Network Architecture: mobilenet_v2_035_128
- Fully Connected Neural Network Architecture:
  - ReLU Layer with 70 nodes.
  - Output Layer with 2 nodes. (To give out the logits for the model then afterwards compute the softmax cross entropy).

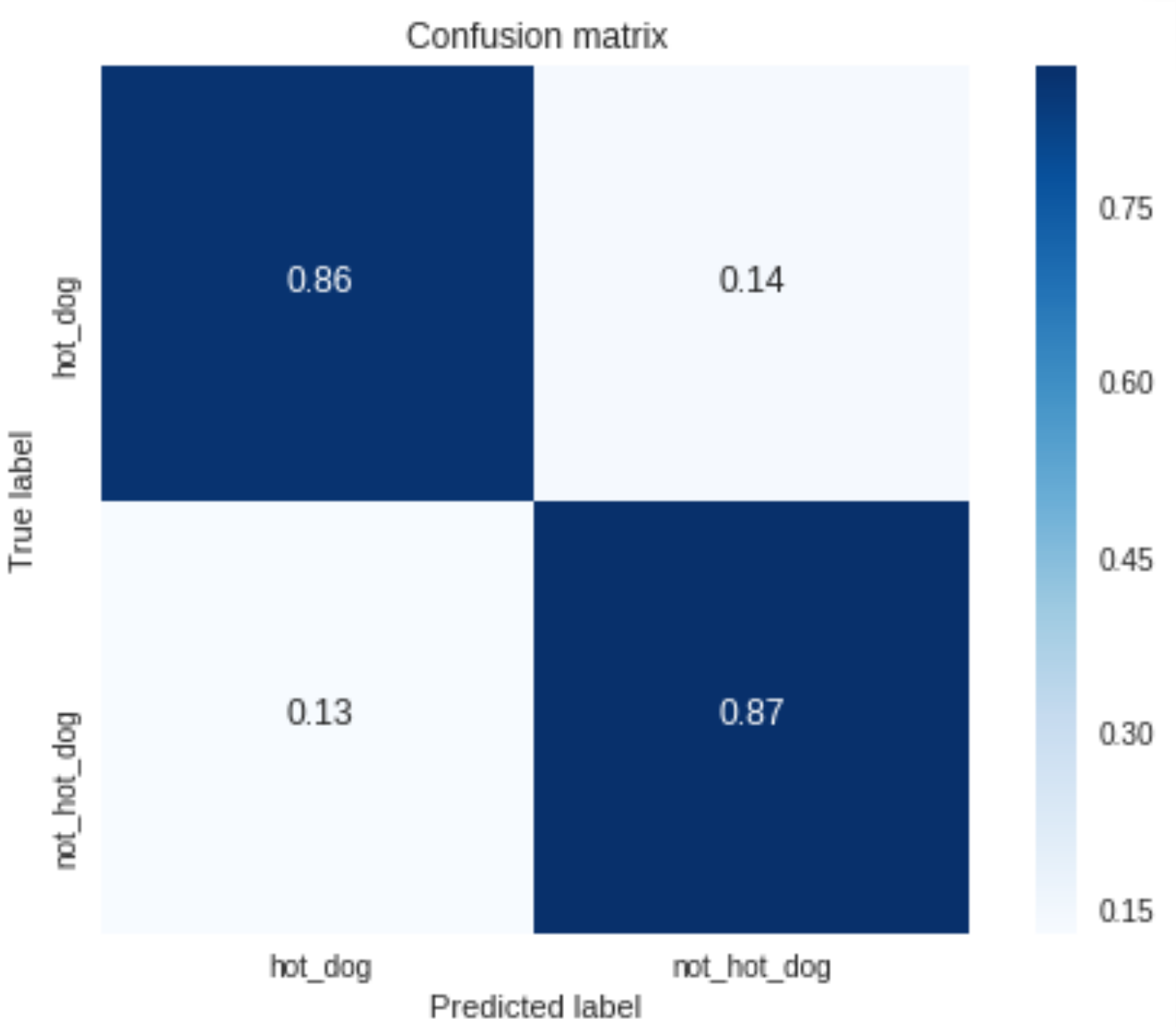
  - Adam Gradient Descent
  - Learning rate = 0.01
  - Number of Epochs = 100
  - Batch Size = 100

Example Pictures

Training Process of the Model

- Split the Data into two sets: Train Set (80%) and Test Set (20%)
- Train on the Train Set, and for every 10 epochs check the accuracy on the Test Set.

Test accuracy at step 0: 50.00%
Test accuracy at step 10: 50.00%
Test accuracy at step 20: 50.00%
Test accuracy at step 30: 50.00%
Test accuracy at step 40: 50.00%
Test accuracy at step 50: 82.50%
Test accuracy at step 60: 85.00%
Test accuracy at step 70: 85.50%
Test accuracy at step 80: 86.50%
Test accuracy at step 90: 86.00%
Test accuracy at step 99: 86.50%


Confusion matrix
0.86
0.14
0.13
0.87
hot_dog
not_hot_dog
True label
hot_dog
not_hot_dog
Predicted label
0.75
0.60
0.45
0.30
0.15

prediction: hot_dog
label:not_hot_dog

prediction: hot_dog
label:not_hot_dog

prediction: not_hot_dog
label:hot_dog

prediction: hot_dog
label:not_hot_dog

prediction: hot_dog
label:not_hot_dog

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prediction: not_hot_dog
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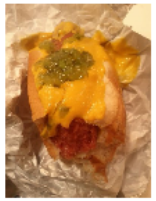
prediction: hot_dog
label:not_hot_dog

prediction: not_hot_dog
label:hot_dog

prediction: not_hot_dog
label:hot_dog



prediction: not_hot_dog
label:hot_dog

prediction: not_hot_dog
label:hot_dog

prediction: hot_dog
label:not_hot_dog

prediction: not_hot_dog
label:hot_dog

prediction: hot_dog
label:not_hot_dog

prediction: not_hot_dog
label:hot_dog

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label:hot_dog

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label:not_hot_dog

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label:hot_dog

prediction: hot_dog
label:not_hot_dog

prediction: hot_dog
label:not_hot_dog

prediction: not_hot_dog
label:hot_dog

prediction: hot_dog
label:not_hot_dog