**Hyper-parameter Experimentation**

This is a document to look at how the accuracy of the algorithm varies as we vary the hyperparameters of the CNN code.

**Sequence Length**

For this table the activation function was a Sigmoid, the batch size was 350, the learning rate was 0.0001, the number of epochs was 700, the number of layers was 4 convolutional layers and we were using dropout regularisation with a keep probability of 0.5.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Seq\_len | Train Acc | Test Acc | Converged after | Notes |
| 100 | 0.637143 | 0.708571 | 395 | Test Acc the same from Epoch 1 |
| 50 |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Seq\_len = 100 it is probably just predicting all as not a cough.

Batch Size

Learning Rate

Regularisation

Number of Layers

Number of epochs