**Weekly report**

*Work on TFRecords and CASIA dataset*

Very little success with reading in TFRecords. The examples available online are very obscure (we may as well be translating them rather than Chinese) and I haven’t figured out how to read in the TFRecords and parse them into a neural network.

Wrote code to save as many unique characters as we want into a TFRecord, so instead of saving the entire 4000+ characters into a TFRecord, we can start working with 10, or 20, before moving onto more.

*Work on transfer learning*

With transfer learning I have made a script that can load and feed data into a CNN and another script that can load and print out bottlenecks from a CNN. In addition, I have started a script that will read in the bottlenecks I save from a loaded model and uses them to train the final layer of a CNN but with 30 outputs instead of 10.

It is worth mentioning that this work will be good as a rough proof of concept however once we have the dataset complete, we will have to retrain the CNN with 10 outputs so that we can keep training and testing data separate. In addition these scripts will have to be altered to do everything in TFrecords.

**Action points for the next week**

1. Work on the bottleneck script so that it can save the bottlenecks as a dataset.

2. Continue to work on a script to retrain the final layer of a CNN using loaded bottlenecks

3. Figure out how to read in TFRecords

4. Once we can read in TFRecords files, ensure they can be put in the network to train it.