Project Proposal – Text Classification Competition

1. Team Name: **SSW Classifiers**
   Members:
   - Saravana Somasundaram (captain) – ss129
   - Shashivrat Pandey - spandey6
   - Walter Tan - wstan2
2. Competition – **Text Classification**
3. Neural Networks we are looking to explore for Text classification:
   a. Convolutional Neural Network (CNN)
   b. Recurrent Neural Network (RNN)
   c. Hierarchical Attention Network (HAN)
4. References we have looked so far:
   a. https://keras.io/examples/nlp/text_classification_from_scratch/
   b. https://medium.com/jatana/report-on-text-classification-using-cnn-rnn-han-f0e887214d5f
   c. https://realpython.com/python-keras-text-classification/#convolutional-neural-networks-cnn
   d. https://towardsdatascience.com/classification-using-neural-networks-b8e98f3a904f
5. The programming language we will be using is **Python**.

Our group is prepared to learn how text classification algorithms can be implemented using state-of-the art neural networks such as Convolutional Neural Network, Recurrent Neural Network and Hierarchical Attention Network. We are excited to learn techniques to improve our ML skillset and will apply what we learned to our current/future work projects.

Some Deep Learning frameworks we've heard of include PyTorch, TensorFlow, Keras, and Sonnet. TensorFlow and PyTorch seem to be the most popular and used by many users and institutions worldwide. Our group has never worked with these technologies, but are excited to learn these new technologies for this competition. We will be using Python for this project and we are confident that we will come up with an optimized code to improve the performance of application.