1. Our project team members are Chen Yuan (cheny9), Sameer Phadnis (phadnis3), and Abhishek Shinde (ashinde2). Team name is “Text Dragons” and Sameer Phadnis is team captain.
2. We plan to join the text classification competition.
3. Yes, we are prepared to learn state-of-the-art classifiers. Some popular neural classifiers consist of LeNet, AlexNet, and GoogLeNet. For a computer vision project, Abhishek’s team utilized a modified LeNet convolutional neural network to classify images of sign language into the letters of the alphabet.We may also explore the below neural classifiers and deep learning frameworks for the project:
   Feed Forward Neural networks:
   - Deep Average Network
   - fastText

   RNN (Recurrent Neural Network) based models:
   - Tree-LSTM
   - Multi-Timescale LSTM

   CNN (Convolutional Neural Network) based models:
   - Dynamic CNN

   Capsule Neural Network:
   - CapsNET

   Transformers:
   - BERT
4. We will use Python as the programming language for the project

Project Proposal: Text Classification Competition: Twitter Sarcasm Detection

Group Name:
Text Dragons

Team members:
Chen Yuan (cheny9), Email: cheny9@illinois.edu
Sameer Phadnis (phadnis3) - **Team Leader,** Email: phadnis3@illinois.edu
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Overview:
We will be joining the text classification competition. The object of the competition is to identify sarcasm from a set of Twitter responses. The given dataset is split into two: the train dataset (5000 observations) and the test dataset (1800 observations). For the training dataset, we are given the response (which is the Tweet to be classified), the context (which is the conversation of the context) and the label. We will be using the training dataset to build the models and making predictions based on the test set.

Objective:
We will be using **Python** as the main programming language for the project. We will try different models with state-of-the-art classifiers. Our potential candidates includes:

1. LeNet
2. AlexNet
3. GoogLeNet
4. ResNet
5. LSTM
6. Fasttext

Abhishek's team has had previous experience on a computer vision project, which utilized a modified LeNet convolutional neural network to classify images of sign language into the letters of the alphabet. Chen has had previous experience building Wide-ResNet models to classify street view house numbers.

Challenges:
There are several challenges that we need to address throughout our project:

1. The Tweets may contain emojis and spam information that we need to deal with at the data preprocessing step.
2. The power of a CPU may not be sufficient to train deep neural network models. Therefore, we will need to leverage some cloud computing resources, such as google colab.