# PROJECT TITLE:

TEXT VS TREES VS GRAPHS: DEEP LEARNING TECHNIQUES FOR PROGRAM UNDERSTANDING

# PROJECT OBJECTIVES:

* To build a Recurrent Neural Network that makes use of NLP techniques to understand the contents of python programs
* To build a Deep Feed-Forward Neural Network that makes use of NLP techniques to understand the contents of python programs
* To build a Tree-Based Convolutional Neural Network that makes use of Abstract Syntax Trees to understand the contents of python programs
* To build a Gated Graph Sequence Neural Network that makes use of Directed Graphs to understand the contents of python programs
  + To train these models on the same datasets (code snippets of sorting algorithms)
  + To test these models using the same datasets (a separate set of sorting algorithm code snippets)
  + To compare the results of testing with all three models to determine which is best for processing source code.

# THINGS TO NOTE:

* Be very descriptive about the design and construction of each of the Neural Network models.
* Include references for each model