**Group Name:** The Techy Trees

**Topic:** Shape recognition and digitalization

**Members:** Eli Smith, Mark Zhang, Henry Yang

**Description:**

The main purpose of this project is to be able to recognize shapes on paper. Some real-world applications of this technology include translating handwritten essays into a digital format, recognizing/grading exam papers, and doing math problems. We hope to quickly be able to isolate a figure on a piece of paper, but getting the computer to recognize a shape will be an immediate need of ours.

**Baseline Expectations:**

1. Isolate Digital Shapes
   1. Circles
   2. Squares
   3. Triangles
2. Recognize Digital Shapes
   1. Circles
   2. Squares
   3. Triangles

**Aspirations:**

1. Recognize Printed Numbers
   1. Isolate
   2. Recognize
2. Recognize Printed Capital Letters
3. Isolate
4. Recognize
5. File Output
6. Hand Drawn Letters / Words
7. Learn about a machine learning platform that we could use

**Immediate Needs:**

1. Research on different shape recognition algorithms

**Timeline:**

* Wednesday
  + Submit Research Proposal
  + Create Central Repository
* Thursday
  + Begin creating image pre-processing program
  + Begin write a demo using FLANN
  + Line detection program
  + Create test images
* Friday
  + Shape detection program
* Rest of time
  + TBD