**CSCI4220U**

**Project Proposal**

Cody Macedo

100486136

March 12th, 2018

For my final project, I have a main idea and an idea to fall back on if that doesn’t work or if it isn’t suited for the project.

The first idea that I am proposing is to use computer vision to create a physical mirror, without the typical components of a regular mirror. This idea is similar to an art installation that recently got created for a big company (I think it may have been Nestle, but I can not remember exactly). In this project, the mirror component will be made of a 2d array of actuators where an actuator will flip when it is “reflecting” something and return to its original position when it stops “reflecting”. Alternately, I could use a 2d series of LEDs for the reflection instead of actuators. To capture and process the image that will be displayed on the mirror, I would use an outward facing webcam. The images retrieved from the webcam will be processed in OpenCV to find depth information and decide what part of each image needs to be displayed to the mirror.

The fall back idea I had was to create a mobile computer vision program that will work on a phone. The app will stream video and process each image, applying a filter to the incoming image and displaying the processed image to the screen. Some filters I am considering are an ascii filter, black and white filter, outline filter, etc.