

**ECE Capstone program
Spring 2018
Project Abstract & Info**

1. Project number: 23

2. Project title (as will appear on the poster):

Machines Learn Sign Language

3. Team members:

Gao Pan (POC)

Kevin Lin

Jan Matthew Miranda

Raj Patel

Kendric Postrero

4. Adviser(s) name(s):

Anand Sarwate

5. Up to 5 keywords that will help to classify the project scope:

Machine Learning Computer Vision ASL

6. Project abstract (up to 250 words) to be shared with judges:

There are millions of Americans that are hard of hearing (including those who are entirely deaf). These people require American Sign Language (ASL) to communicate. However, being such a small percentage of the general population, there exists complications with the communication of people who use ASL and those who do not use or know ASL. Our project aims to shorten this gap in an affordable and accessible manner such that a majority of the population can communicate with those who use ASL as a main source of communication. This project aims to use computer vision to recognize ASL gestures and machine learning to effectively translate these gestures to English. This project utilizes the technologies of OpenCV, Tensor flow and USB cameras to achieve the development of the application. Our objective is to build an application that can learn how to translate American Sign Language (ASL) to English. We will be using a computer vision program in order to collect data sets of hand movements (of sign language) and a machine-learning program that can read these data sets.