Project Title	**American Sign Language / Hand Gesture Recognition**
Technologies	Computer Vision
Domain	Public Safety
Project Difficulties level	Intermediate

Problem Statement:

Build a system that can correctly identify American Sign Language signs that corresponds to the hand gestures.

Our proposed system will help the deaf and hard-of-hearing communicate better with members of the community. For example, there have been incidents where those who are deaf have had trouble communicating with first responders when in need. Although responders may receive training on the basics of ASL, it is unrealistic to expect everyone to become fully fluent in sign language. Down the line, advancements like these in computer recognition could aid a first responder in understanding and helping those that are unable to communicate through speech.

Dataset:

Using the Sign Language MNIST dataset from Kaggle, we evaluated models to classify hand gestures for each letter of the alphabet. Due to the motion involved in the letters J and Z, these letters were not included in the dataset. However, the data includes approximately 35,000 28x28 pixel images of the remaining 24 letters of the alphabet. Similar to the original MNIST hand drawn images, the data contains an array of grayscale values for the 784 pixels in each image. One of these images is shown below.

Kaggle dataset: https://www.kaggle.com/grassknoted/asl-alphabet

Annotated data