Problem Statement

According to the World Health Organization (WHO), there are an estimated 360 million people worldwide with some type of disability.

A physical disability is the long-term loss or impairment of part of a person's body function, resulting in a limitation of physical functioning, mobility, dexterity or stamina. Due to the functional loss the person will experience the inability to perform normal movements of the body. In many cases only using hands and arms is an available option.

This project can help people use hand gestures to manage devices or applications. An Idea of the project is to build a computer vision interface between person and device.
Planning to develop a deep learning-based system that can automatically recognize gestures and convert these to commands to the device. For example, make a call or answer.

Approach

To allow users to use any available gestures and collect train data, Create own trained model.
The project will use Convolutional Neural Network for multi label classification.

Datasets

Dataset will be collected by the end user. Program allows users to collect 300 frames for each hand position. On the next step using data augmentation number images will be increased to 900 for each label.

Deliverable

As part of the capstone project and to show one use case application will be built on Streamlit.