DRONES FOR HUMANITY

Team Members' Positions

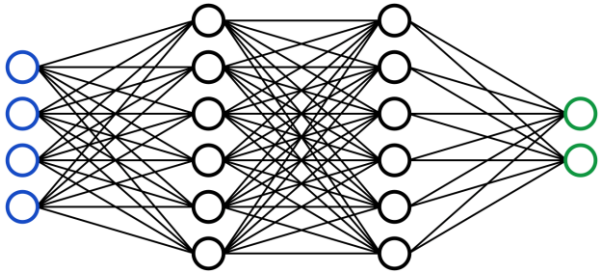
Name	Email	Position
Michael Mascari	mmascari2017@my.fit.edu	Programmer (Computer Vision/AI)
Ballard Barker	bbarker2017@my.fit.edu	Project Manager/ Structures
Matthew Backert	mbackert2017@my.fit.edu	Systems Engineer
Nicholas Davis	davisn2017@my.fit.edu	Avionics/ Propulsion/ Aerodynamics
Brendan Sanders	bsanders2017@my.fit.edu	Production/ Structures
CJ Gagni	cgagni2019@my.fit.edu	Avionics
Justin Williams	justin2017@my.fit.edu	Propulsion
Hamdan Alblooshi	halblooshi2016@my.fit.edu	Propulsion

Faculty Advisor and Client

- The CS faculty advisor for this project is Dr. Debasis Mitra
- The client for this project is the project team
- Client meetings on Fridays at 10AM

Milestone 2

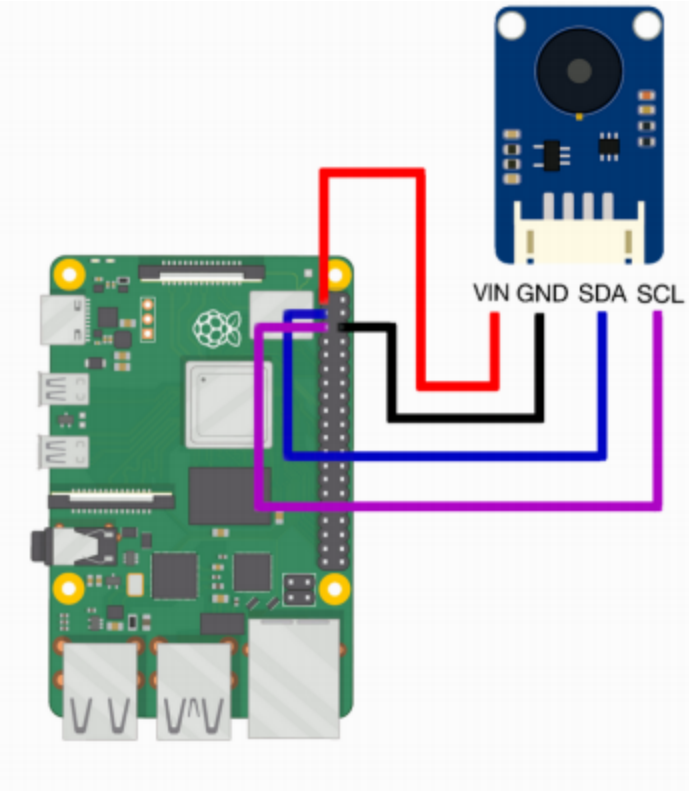
Order hardware



Start work on the Neural Network

Task 1 - Hardware

- Raspberry Pi and Adafruit MLX90640 orders sent to the HSDC



RPI	MLX90640
3.3V	VIN
GND	GND
SDA (Pin 3)	SDA
SCL (Pin 5)	SCL

Task 2 – Neural Network

- Feed Foreword Neural Network with Stochastic Gradient Descent
- Different type of hyperparameters
  - L1 and L2 regularization
  - Sigmoid, elu, and ReLU activation functions
  - Cross Entropy and Sum of Squares loss functions
- Benchmark using KNN program
- Highest accuracy achieved 54% supported by KNN 55%

Milestone 3

- Rewrite neural network as a CNN
- Preprocess data
- Expand dataset