

CYCLOPS

Real-Time Monitoring System

The Team

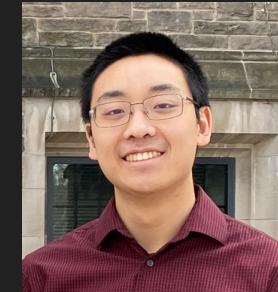
Aaron Li



Manny Lemos



Amos Yu



Brian Le



Amos Cheung

Biking is dangerous.



CYCLOPS

Cyclops Ride Assist (CRA)



CYCLOPS

Another set of eyes on the road

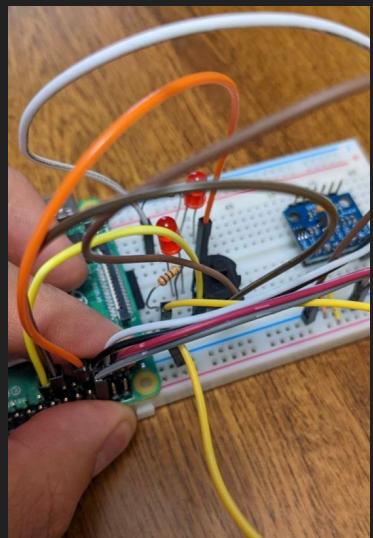


1. Front-Facing Camera
2. Rear Vehicle Detection
3. Crash Identification
4. Video Logging

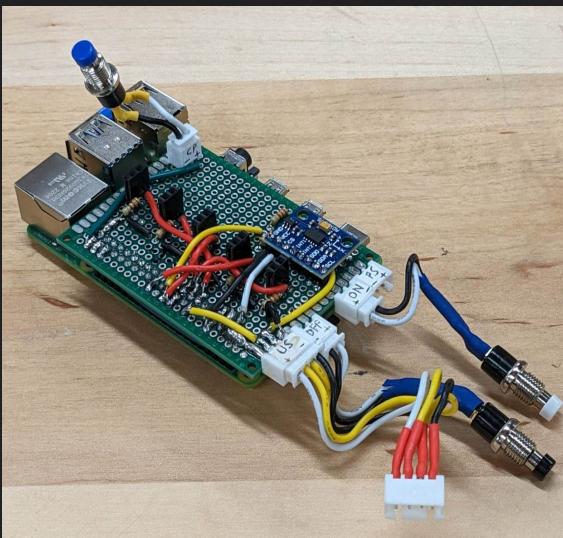
Highlights

- High performance
- Portable
- Easy-to-install
- Easy-to-use

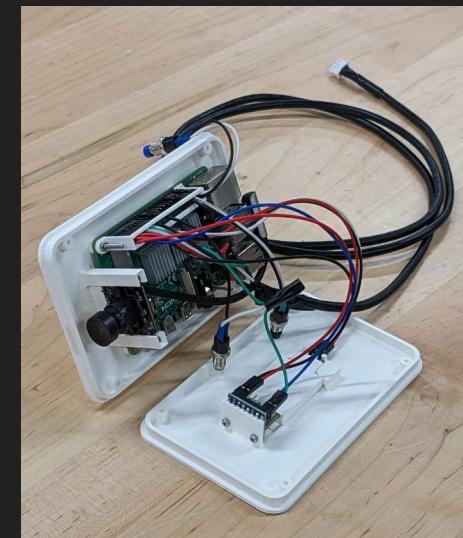
The design process



Breadboard



Protoboard



Direct Wiring

The design process



Camera + CV



Ultrasonic Sensor



LiDAR Sensor

The design process



rev0 Housing



rev1 Housing

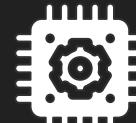
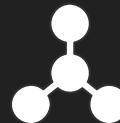
A complete mechatronic system

Software

Control

Electrical

Mechanical

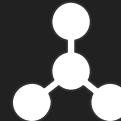


A complete mechatronic system

Software



Control



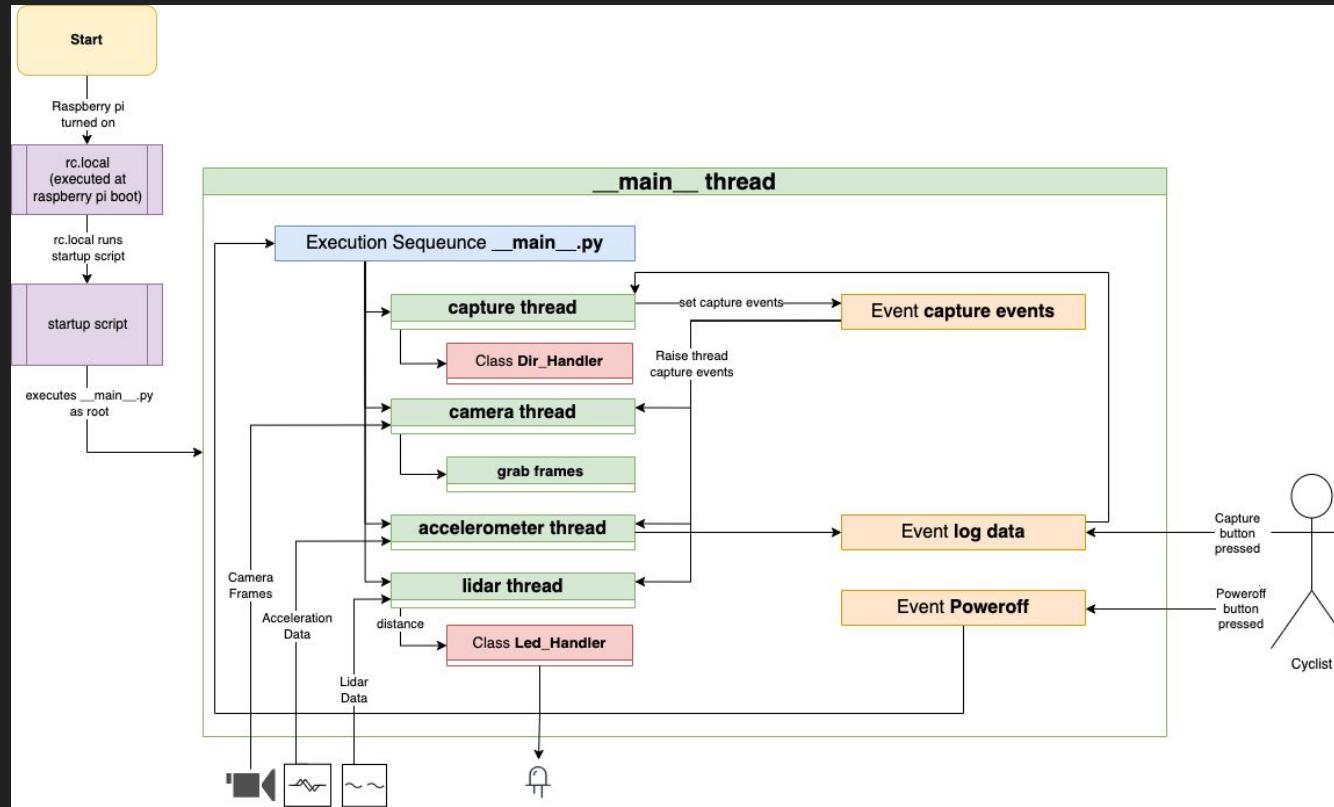
Electrical



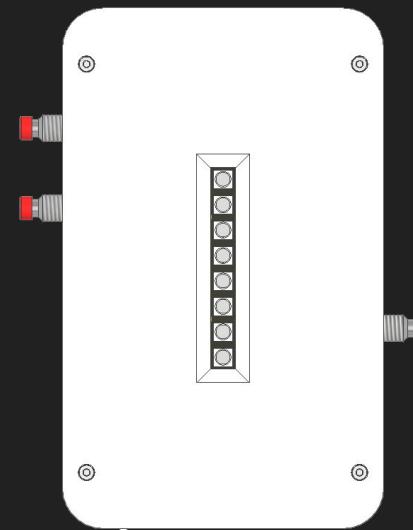
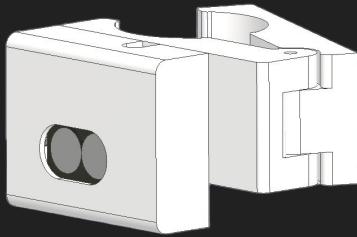
Mechanical



Software Control Flow



Rear Vehicle Detection



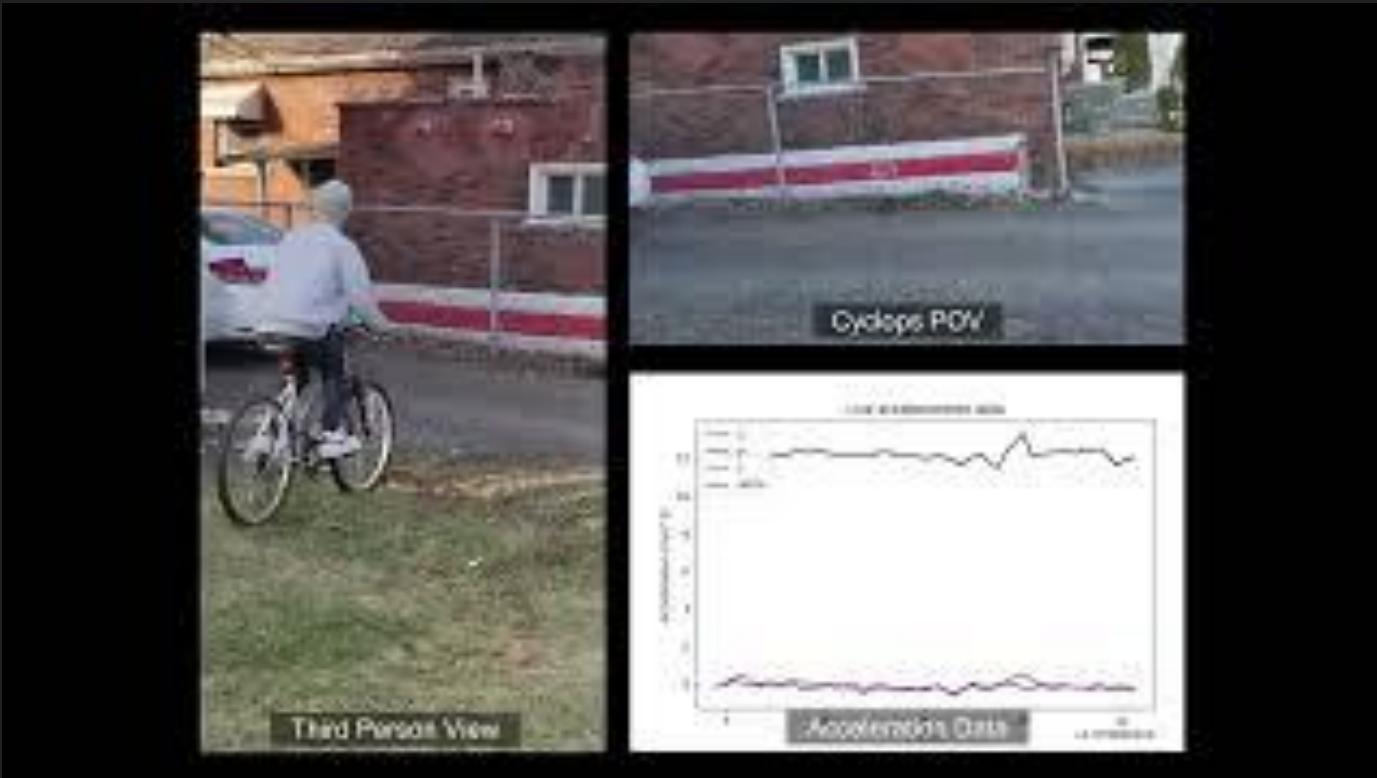
Crash Identification



Terminal Output



Video Logging



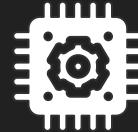
Software



Control



Electrical



Mechanical



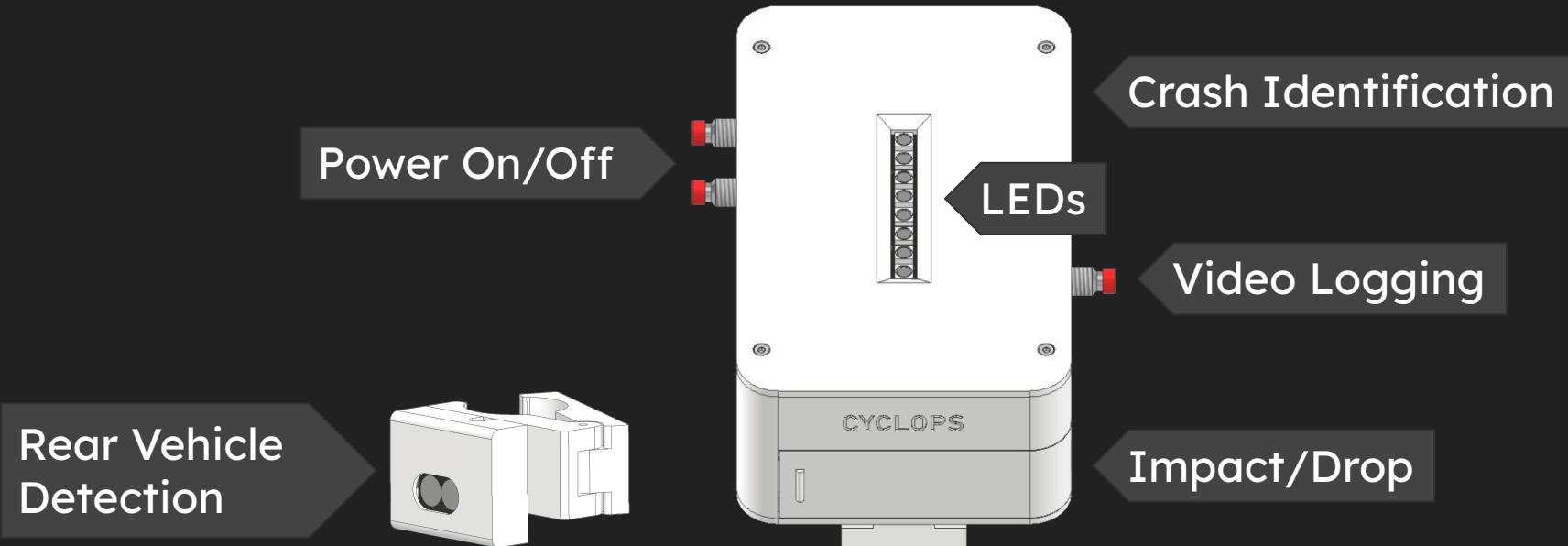
Product Diagram



Designed for assembly



Testing



Why we stand out

CYCLOPS

- Mirrors
- Car Radar
- Car Dash Cams

CYCLOPS

Real-Time Monitoring System