**Goal**

- The goal of the project is to develop a short throw projector system that will provide users a more enjoyable experience as well as increase their safety when operating bicycles.

**Development Challenges**

- **Challenges**
  - Our first attempt at creating a projection system with LASERS was very unsuccessful
  - It was nearly impossible to create a robust enough image with line and dot LASERS which we originally attempted
  - An Arduino Uno was not powerful enough to power the Pico-Projector
  - The Pico-Projector is not designed to work during the day so working on the brightness was an issue
  - Making sure the GPS is accurate enough so that the rider is given proper instructions

**Motivation**

- **Motivation**
  - Increase riders’ safety when operating a bicycle by removing the need to constantly check their phone for directions

**Methodology**

- **Step 1**: Develop a short throw projector
- **Step 2**: Develop a lightweight UNIX-based operating system to run on the Raspberry Pi 3
- **Step 3**: Develop an Android Based app to allow the rider to control the projector
- **Step 4**: Establish a link between the Raspberry Pi and the Android App
- **Step 5**: Build a mounting system that can be used universally on any bicycle.

**Results**

**Acknowledgement**

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