

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.

Motivations

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

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

Acknowledgement

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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

