# Route Navigator

## Car Application

## Full Stack application to control a Car with Wall Detection!

- For this application, the car can be rented by users with credits so they can draw a path on where the car will follow in a birds-eye-view.
- The front-facing camera can also be used to see what's ahead.



# **Components:**

#### Raspberry Pi 4B



The main driver of the Sunfounder PiCar-V

Used to send and receive data from a server.

Controls both of the connected devices

Used to input values into Lidar SLAM

> Ensures safety of Sunfounder PiCar-V

Spins 360°, firing an

invisible beam to

measure impact

distance and angle.

RPLidar A2M8

**Lidar SLAM** (Light Detection and Ranging; Simultaneous Localization and Mapping) Algorithm used to detect walls and estimate the position and orientation of the device [1]



### Backend

#### Sunfounder PiCar-V



Focus of this Application

Used to follow a path that the user has drawn

Has front facing camera for viewing

#### **References:**

https://www.wevolver.com/article/lidar-slam-the-ultimate-guide-to-simultaneous-localization-and-mapping

C++	Xmake	Drogon	MariaDB
Primary Backend Language Used to create high-performance applications	Build System Package Manager	C++ HTTP Application	Database Fork of MySQL

