UC San Diego
Electrical and Computer Engineering
JACOBS SCHOOL OF ENGINEERING

Parking Assistant

Website

ECE 196 Fall 2024
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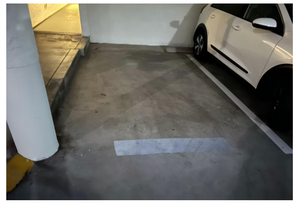
https://sites.google.com/ucsd.edu/team-12/home

Problem

Drivers often encounter parking spots that are too compact to comfortably park into

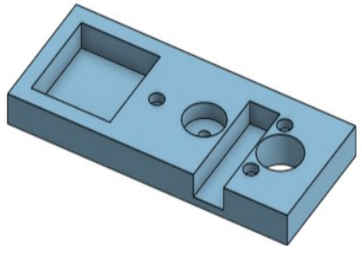


This parking space is too narrow…

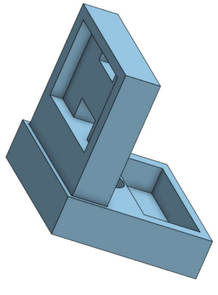
Testable Hypothesis: The lidar sensor correctly measures distances of nearby obstacles, display dots on the screen representing obstacles so the driver knows there are obstacles too close to the car

Design:

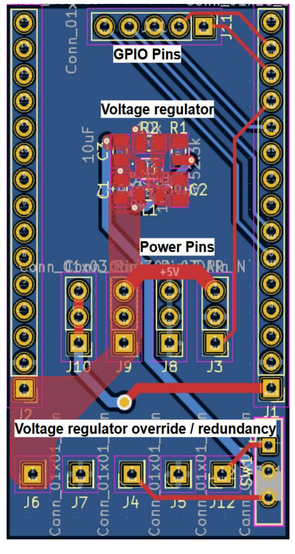
LiDAR Mount



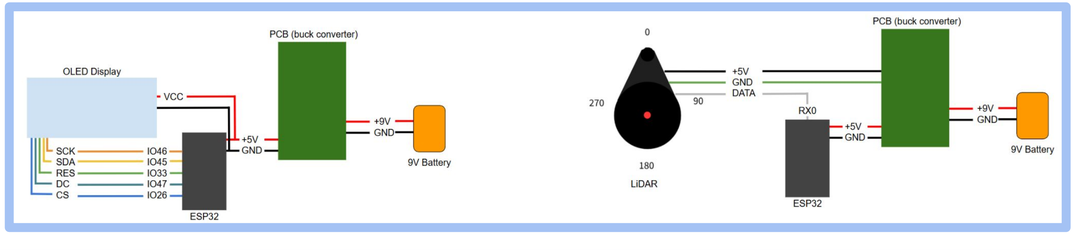
Screen Mount



PCB Buck Converter Layout

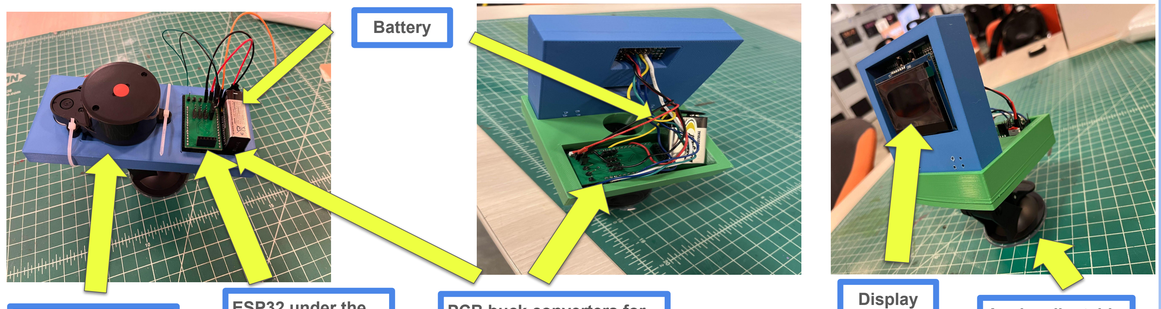


Wiring Diagram

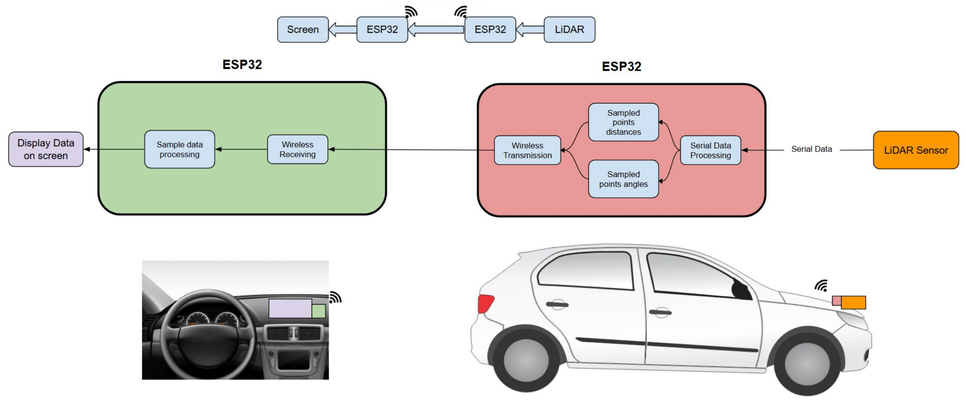


Prototype

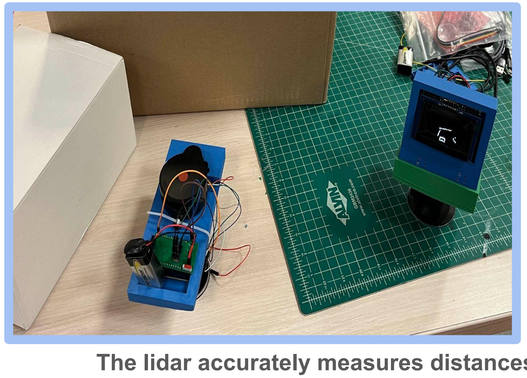
Our design consists of two parts, the screen part goes inside the car and show the driver data

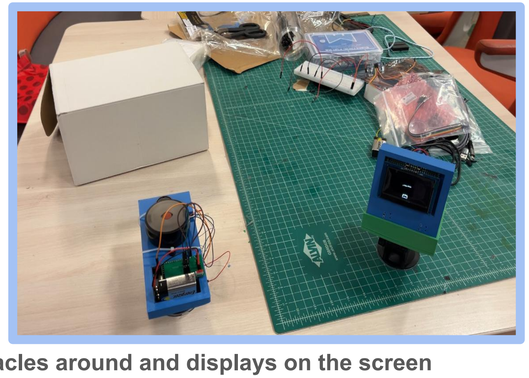


Flowchart



Results





The lidar accurately measures distances of obstacles around and displays on the screen