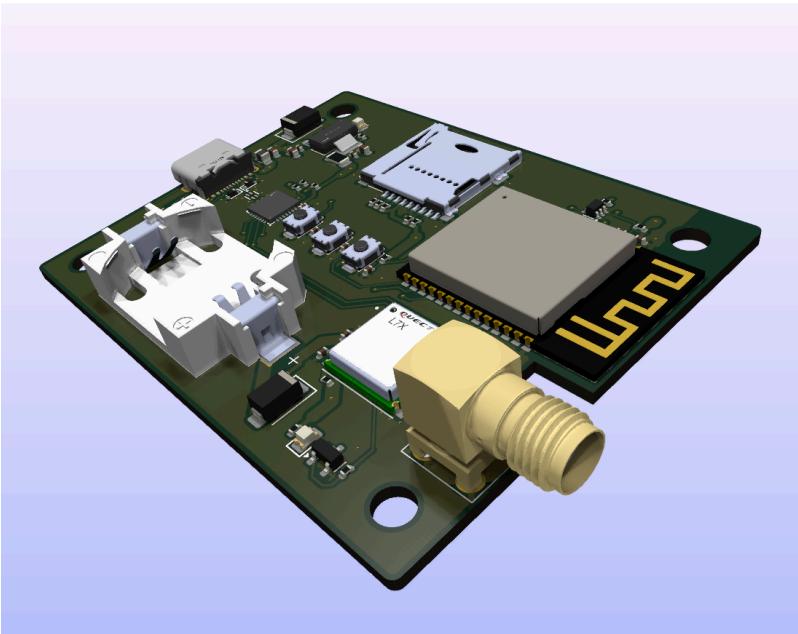


Mileage Logger Project



Scope

To log and display mileage for business purposes. With the ability for switching from personal journey to business journey.

Technical Design Skills

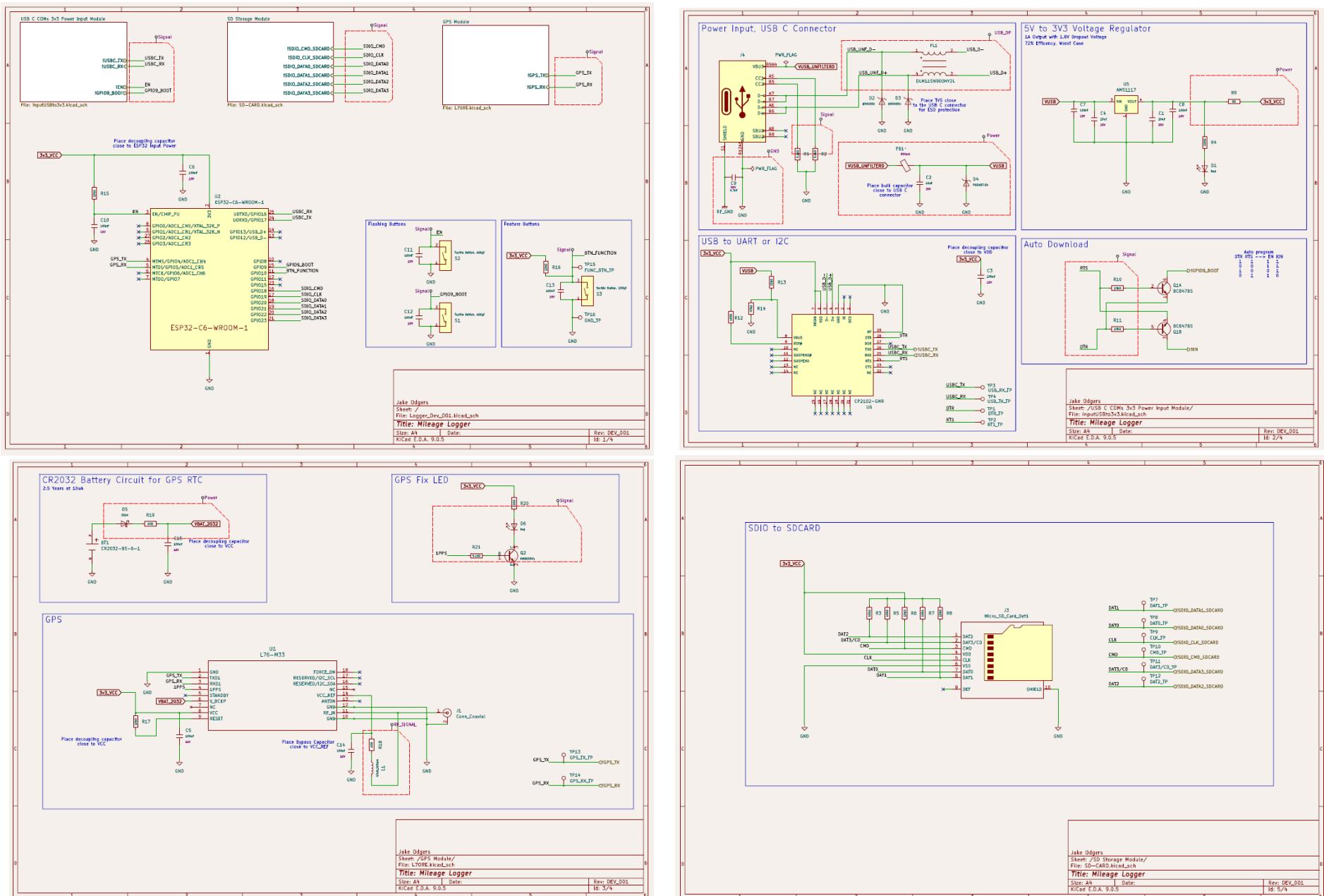
- RF waveguide design with a GCPW (Grounded Coplanar Waveguide)
- Differential pair routing for USB C datalines
- EMC and transient considerations
 - TVS (Transient Voltage Suppression)
 - Common mode chock
 - 4 layer board design with ground pours and power plane

Display

Option 1 - Display through a GUI on a computer made through Python Tkinter.

Mileage Logger Project

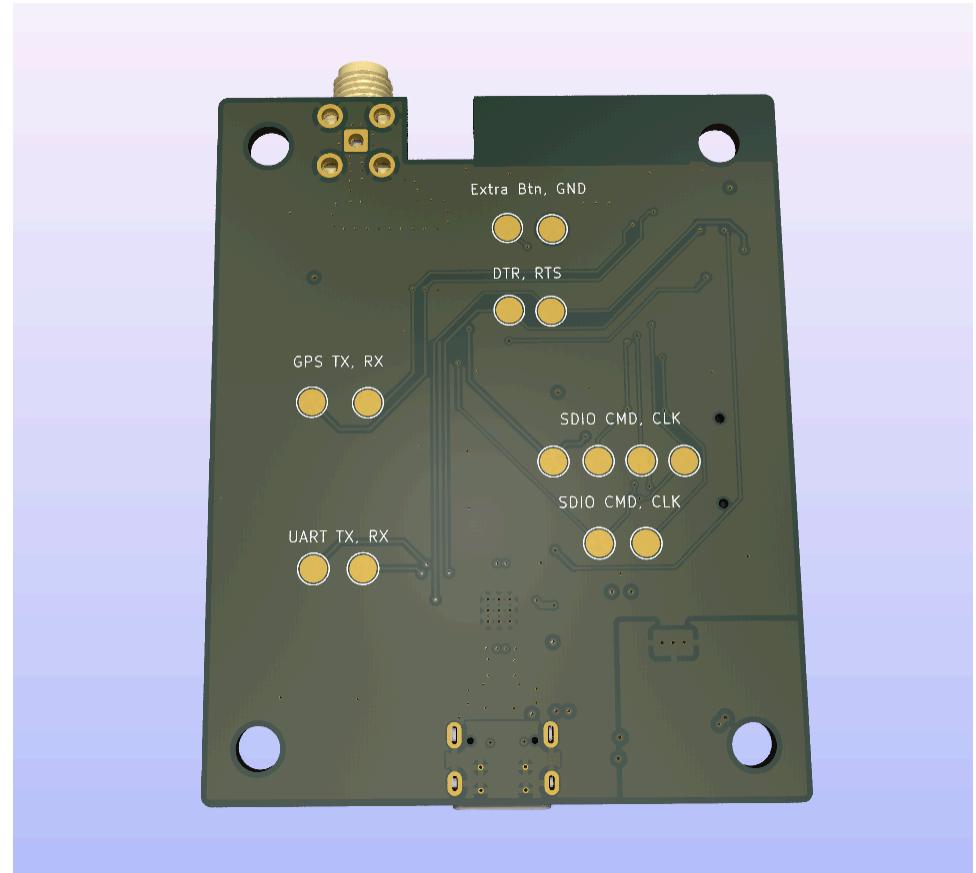
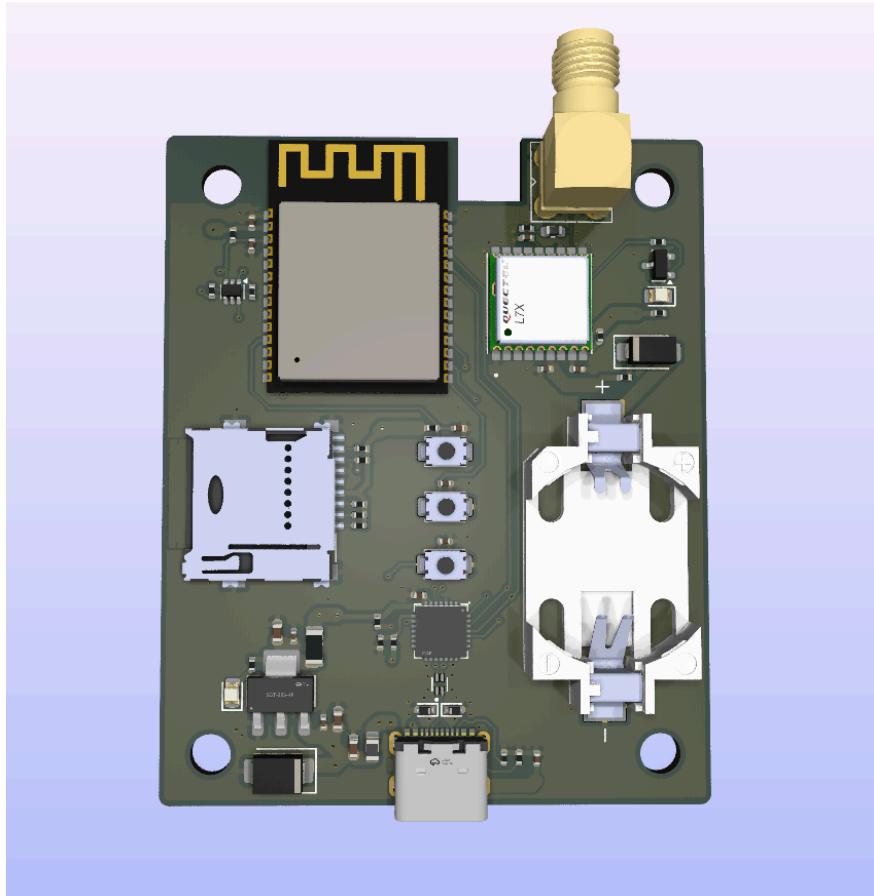
Schematic



Jake Odgers

Mileage Logger Project

PCB Layout



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Mileage Logger Project

GUI OVERVIEW

Option 1 - Computer Display

Remote Access Program

Mileage Logger

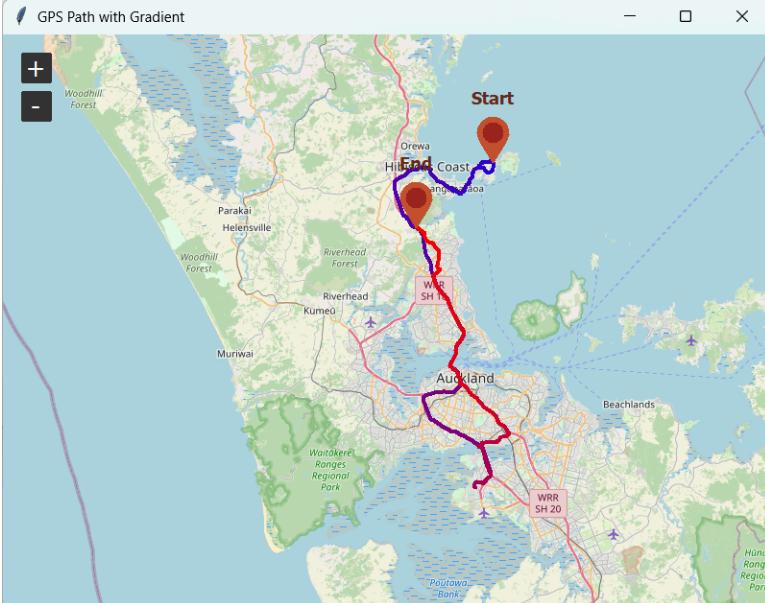
Select a Day:

Select Month & Year:

Distance on 2025-10-01: 134.54 km
Processed 2025 points

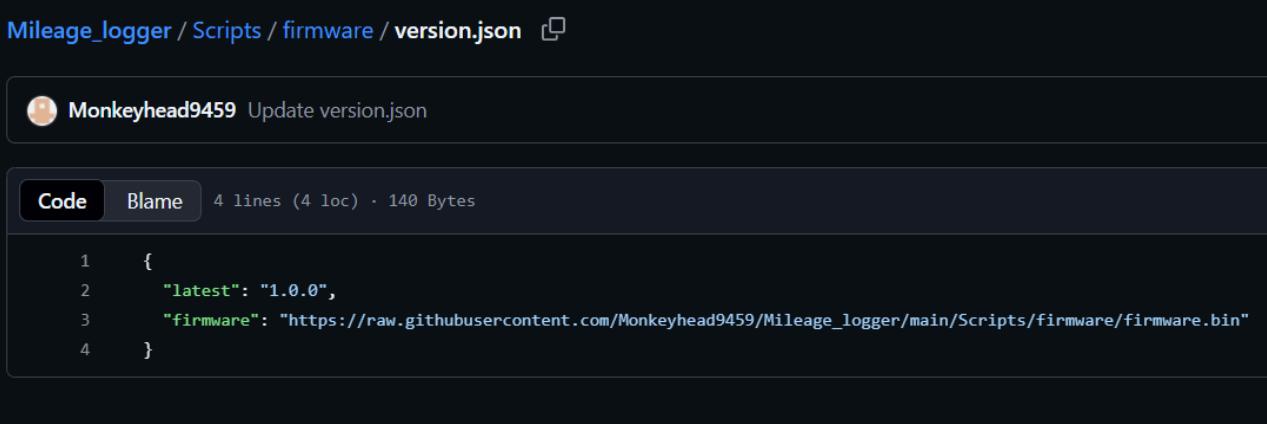
Current Date: 2025-10-04

GPS Path with Gradient



Mileage Logger Project

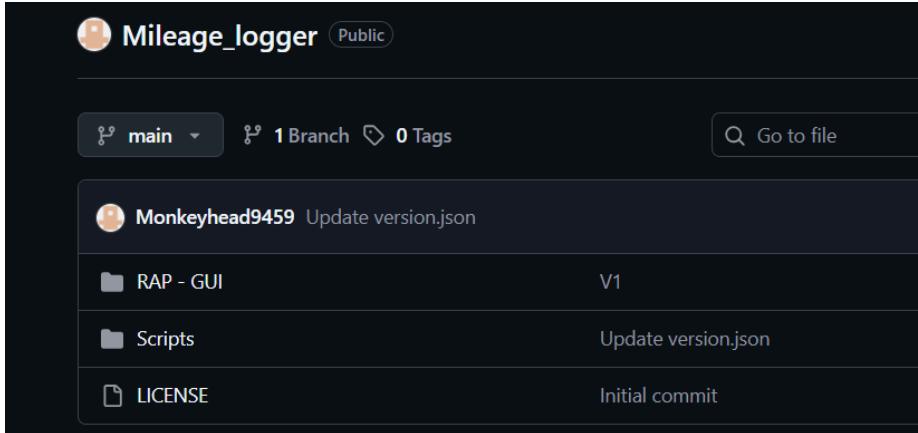
ESP32 REMOTE FIRMWARE UPGRADE THROUGH GITHUB



The screenshot shows a GitHub code editor interface for a file named `version.json`. The file contains the following JSON code:

```
1  {
2    "latest": "1.0.0",
3    "firmware": "https://raw.githubusercontent.com/Monkeyhead9459/Mileage_logger/main/Scripts/firmware/firmware.bin"
4 }
```

GITHUB VERSION CONTROL



The screenshot shows a GitHub repository page for the `Mileage_logger` repository. The repository is public and has 1 branch and 0 tags. The main branch is selected. The repository contains the following files:

- `RAP - GUI`: V1
- `Scripts`: Update version.json
- `LICENSE`: Initial commit

Jake Odgers

Mileage Logger Project

AWS DYNAMODB TABLE FOR CLOUD STORAGE

DynamoDB > Tables

Tables (2) [Info](#)

	Name	Status	Partition key	Sort key	Indexes	Replication Regions	Deletion protection	Favorite	Read cap
<input type="checkbox"/>	raw_data	Active	dev_esp32 (S)	-	0	0	Off		On-demand
<input type="checkbox"/>	raw_data_v2	Active	dev_esp32 (S)	timestamp (S)	0	0	Off		On-demand

API GATEWAY TO LAMDA FUNCTION FOR ESP32 DATA STORAGE

esp32WriteToDynamodb

▼ Function overview [Info](#)

[Diagram](#) | [Template](#)

esp32WriteToDynamodb

Layers (0)

API Gateway

[+ Add trigger](#)

Mileage Logger Project

Improvements:

- Incorporate Google Roads API for more accurate mileage logging by snapping to roads
- Make a portable option for battery connection.
 - SMPS (Increase efficiency)
 - Smaller profile
 - ESP32-C3-MINI-1U
 - Offboard wifi and bluetooth antenna
 - Local/Smaller GPS antenna
- Option 2 for display is making an app through Flutter to connect to the ESP32 through bluetooth and store and display results as well as change journey status from business to personal.