

Visualizing Fuel Economy Information

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Project Thesis

The objective of this project was to visualize fuel economy information overlaid on a map for easy interpretation and evaluation through development of a mobile app. This visualization will provide users with easy-to-read information about how driving habits impact fuel economy.

Background

Modern vehicles keep track of fuel economy data internally, but there is no easy way to break down the data further. Additionally, older vehicles do not store this data at all. Because of this, the only option for older vehicles is calculating fuel economy information manually when the vehicle is refueled.

Project Achievements

- Mobile application developed for iOS/Android using Ionic Framework
- Interface with vehicle OBD (On-Board Diagnostic) bus achieved via Bluetooth connection
- Fuel economy data calculated and overlain on Google Maps display



Experience Gained

- Understanding of web development techniques
- Proficiency in Typescript and HTML programming languages
- Understanding OBD serial communication protocol
- Work with community developed plugins and integrate them with our application



Vgate OBD-2 Scanner Used in Project for Bluetooth Connectivity

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