

# SMART TRIP PLANNING

Suggesting optimal refuel stops based on accurate fuel range predictions and gas costs.

This app would be valuable for any long drive. It also benefits industries that rely on vehicles for long travel by looking to optimize car refueling by determining the most economic stops



## Background

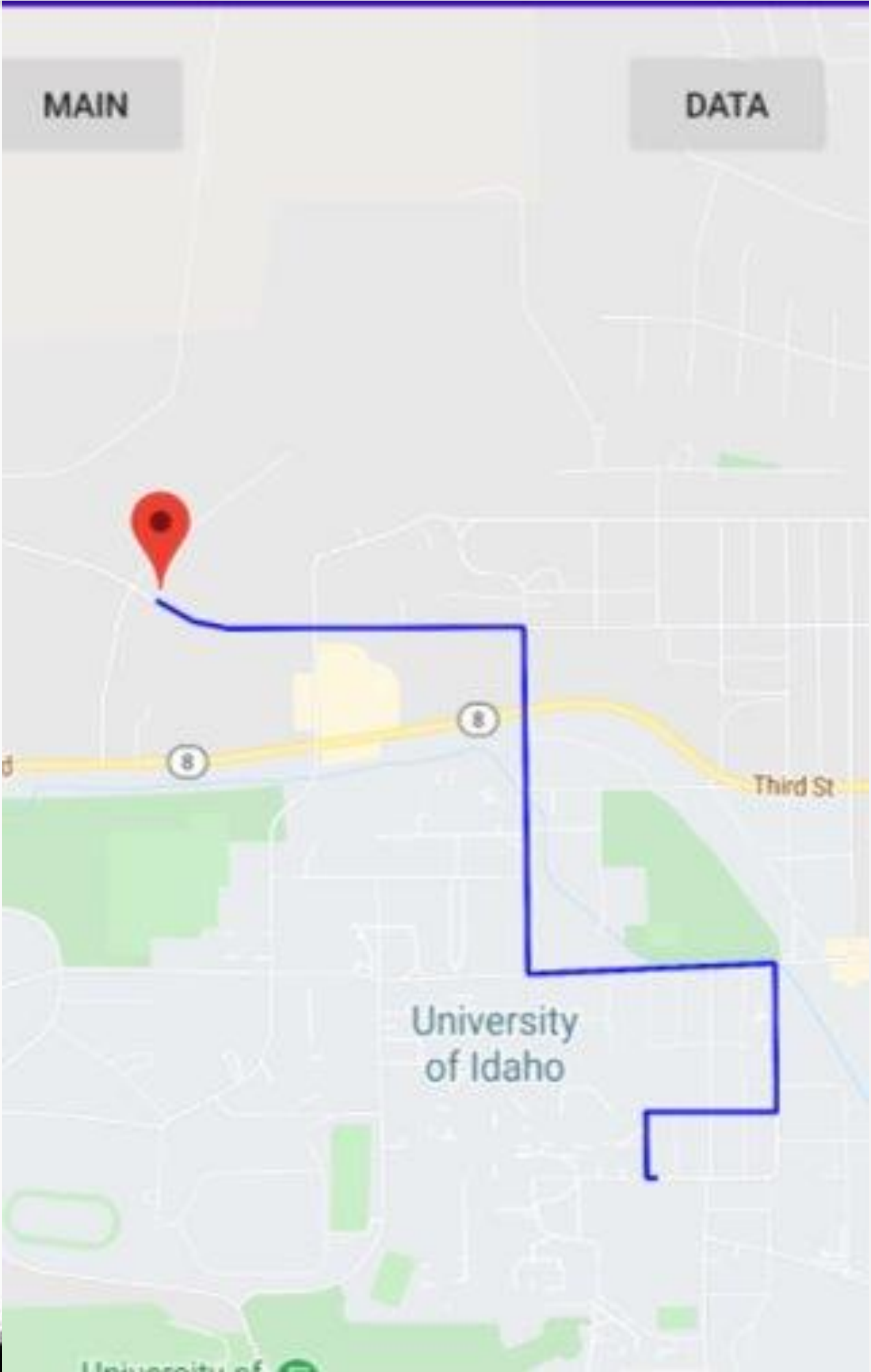
- I A car's ECU holds lots of data
- I Gas prices change frequently
- I Long drives pass gas stations w/out price consideration

## Requirements

- I Research fuel consumption
- I Improve car's range estimation
- I Find gas along a set route

Vehicle Speed: 0 km/h  
Engine RPM: 787  
Engine Runtime: 00:18:22hh:mm:ss  
Trouble Codes: C0300

Idling Fuel Consumption: 0.119508795 Litre  
Driving Fuel Consumption: 0.0 Litre  
Instant Fuel Consumption: 0.0 L/100km  
driving maf: 0.0 g/s  
idle maf: 855.6973 g/s  
Fuel Type: 14.7  
Rapid Acceleration Times: 0  
Rapid Decleration Times: 0  
Max Rpm: 870  
Max Speed: 0 km/h  
Driving Duration: 0.0 minute  
Idle Duration: 5.022567 minute  
Distance since codes cleared: 12712km  
Distance traveled with MIL on: 0km  
Intake Manifold Pressure: 41.0 kpa  
Air Intake Temperature: 327.15 C  
Fuel Consumption Rate: null L/h  
Fuel Level: 26.3%  
Fuel Pressure: null  
Engine Fuel Rate: null  
Engine Coolant Temperature: 91C  
Engine Load: 26.7%  
Engine oil temperature: null  
Barometric Pressure: 92kPa  
Air/Fuel Ratio: 14.65:1 AFR  
Wideband Air/Fuel Ratio: 14.65:1 AFR  
Absolute load: 22.0%  
Control Module Power Supply : 13.0V  
Command Equivalence Ratio: 0.0%  
Diagnostic Trouble Codes: MIL is OFF0 codes  
Describe protocol: AUTO ISO15765-4/CAN11.1



## Risk Assessment

- I Being offline
- I Bad MAF sensor

## Development

- I GPS cord. distance
- I Snap to roads
- I List gas stations