Problem Statement and Goals
Greenway

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Table 1: Revision History

Date	**Developer(s)**	**Change**
Sep 25, 2022	Priyansh, Utsharga, Sharjil, Jash, Bilal, Pranay	Rev. 0
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1 Problem Statement

1.1 Problem

Navigation applications are commonly used applications while driving to get directions from point A to B, but these applications never tell you how much it costs you to get there or how much gas was used on the trip. When carpooling with friends, the driver of the vehicle always asks everyone in the group for gas money and often times these calculations are mere estimates that are not always very accurate. People often wonder how much it costs to get to a destination before starting your journey, having an application perform these cost and fuel calculations based on real time gas pricing information ensures you save the most money on your journey while minimizing gas usage to encourage a more sustainable lifestyle.

1.2 Inputs and Outputs

Inputs	**Outputs**
Starting location	Most fuel efficient route
Ending location	Cost of driving (from starting to ending location)
Car specifications (year, make, model, trim) or fuel economy	Suggested stops at gas stations/supercharger locations based on real-time prices
User estimate of how much fuel or distance worth of fuel is currently in the gas tank.	

1.3 Stakeholders

1.4 Environment

[Hardware and software —SS]

2 Goals

Goals	Importance
The finished product is able to determine the fuel economy of any given car as input.	This is one of the fundamental functions which will help the product appeal to the stakeholders. The larger the database, the more it might be used.
The finished product is able to calculate the trip cost based on mileage and distance travelled, while factoring in elements like the terrain.	This will ensure trips costs are calculated as accurately as possible factoring in trip length, fluctuating gas prices, and elevation changes over the route.
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This will ensure the user gets gas prices in real time, hence cost of trip updates with changing prices.	This allows the product to be robust and resistant to being outdated.

3 Stretch Goals

Goals	Importance
The finished product is portable.	Although our product will be a web application, having it available as a mobile application will allow users to know the gas mileage on the go instead of having to see it on a computer.
The finished product can interact with a voice assistant.	Currently, Greenway is only accessible to the user by opening or entering the application. By letting the user use a voice assistant, they will be able to get these cost and fuel calculations from outside the application.
The finished product can support navigation with Google Maps.	Our current goal only lets Greenway serve as a trip planner rather than an actual application you can use to navigate with while you drive. Allowing users to navigate with it during the trip lets users not have to remember the route and stops to enter into their navigation application of choice beforehand.