* **Executive Summary** ­

In 2020, Brent crude oil spot prices averaged $75 per barrel in July and spiked up by $2 per barrel from the end of the year on. This year, given the growth in employment and increasing mobility, the prices of gasoline continue to rise. U.S regular gasoline retail price today is at an average of $3.19 per gallon. The most expensive gas price average of the year as well as $1.02 more than a year ago. Despite the increase, we continue to see a robust demand for the peak summer driving season. We decided to develop an app that will help travelers to know the estimated cost of their trip before they begin their journey.

* **Title of Project**

Using ML to Predict Road trip Cost

* **Goal of project**

Predicting gas price on a particular date based on oil prices. With a start point and an end point as well as the kind of vehicle being used for a particular trip, we will predict how much gas would be used for a particular trip. When a user, puts the information requested below into the app, they will be able to estimate the cost of their round trip.

Outgoing Trip

* Cost of gas per location
* Cost of gas per Gasoline Type
* Location and number of stops
* Total cost of gas for outgoing trip
* Type of vehicles

Incoming Trip

* Cost of gas per location
* Cost of gas per Gasoline Type
* Location and number of stops
* Total cost of gas for incoming trip
* Type of vehicles
* **Hypothesis to be tested**

How much gas would cost on a given road trip based on the users input

How inflation has impacted the price of gas in each area.

* **Research Techniques**

We used resource, we collected information from U.S Energy information Administration (EIA) eia.gov, API keys.

* **Using**

HTML

AWS

Pandas

Spark

Tableau

Heroku

* **Final/ Summary**

To sum up, we have seen a continuous spike in gas prices and some fluctuation in the prices per state, for instance regular gas in the golden state is currently at $3.885 per gallon, while in Texas, it is $2.626, about a 47% difference. It will be ideal to have an app in place to get an estimate of a user’s road trip.

* **Appendix**

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