Resources used:

- Tableau
- SQLITE (open-source online SQL interpreter)
- PyCharm

Relevant names assigned to CSV files:

- SheetA - Grill_Specifications
- SheetB - Customer_survey
- SheetC – Grill_Experiment_results

Fuel efficiency

Preferred grill type based on Fuel efficiency analyzed from data in Grill_Specifications. Comparison shown with Bar Chart in Tableau.

Market share

Grill type that has more market share analyzed from data in Grill_Specifications. Pie Chart in Tableau used as the representation of market share percentage.

Fuel cost for long run

To analyze the grill type that costs more fuel on a long run a line chart is used to represent how much each grill costs to operate for cookout in 16 weekends per year across 10-year span. Data to perform this analysis is obtained by using Excel Formula to get cumulative fuel cost across the years.

Total cost for 3 years

To analyze which grill costs more taking both Fuel cost and Initial investment into account Excel Formula was used to calculate the fields.

Calculations performed:

Charcoal grill

Initial investment along with fuel provided for first time taken separately. For Charcoal grill initial investment covered cook-out cost for first 10 usages and remaining 6 cookouts calculated and added with total cost for 1st year. For remaining 9 years cumulative cost calculated is calculated.

Propane grill

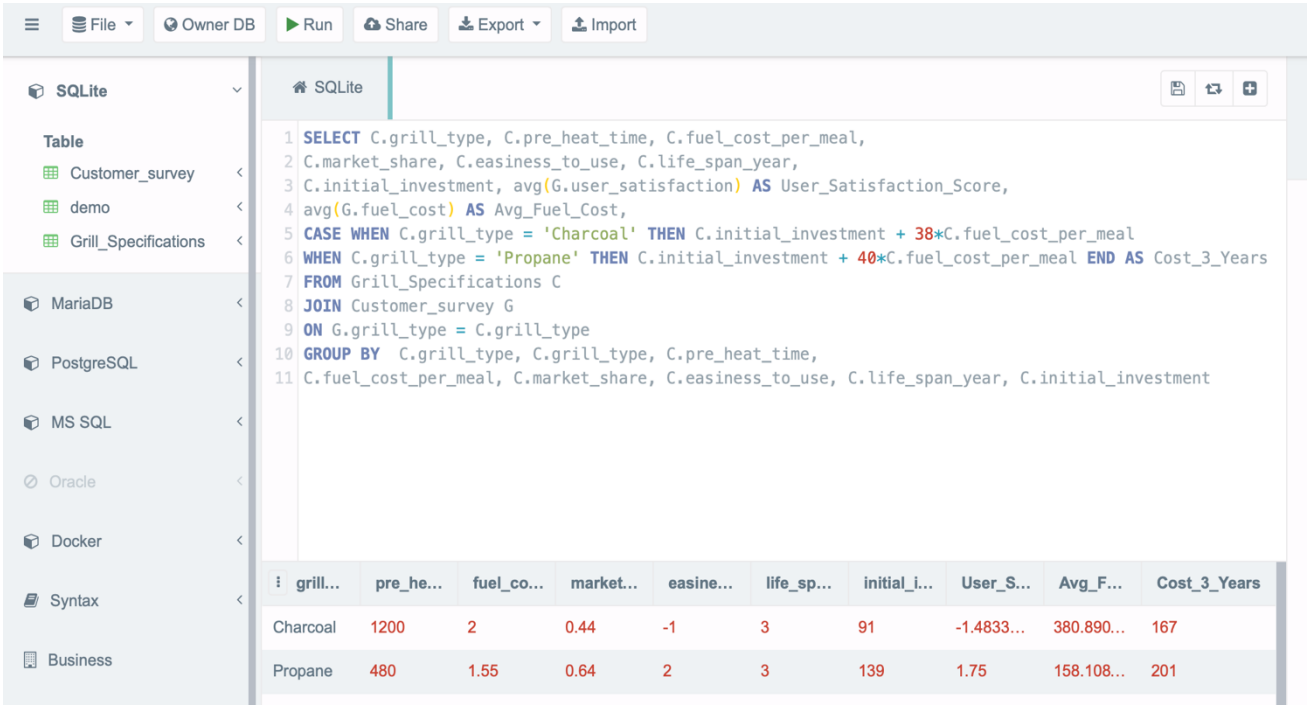
Initial investment along with fuel provided for first time taken separately. For Propane grill initial investment covered cook-out cost for first 8 usages and remaining 8 cookouts calculated and added with total cost for 1st year. For remaining 9 years cumulative cost calculated is calculated.

Line chart used in Excel to compare total costs for both grill types.

User satisfaction

Average User satisfaction score from Customer_survey data compared with Average Fuel cost, pre-heat time and Average Easiness fields from data provided in Grill_Specifications. Bar Chart used for comparing values across different food items for both grills.

Aggregated dataset



Recommendations to manufacturer

Recommendations made on previously analyzed factors. Also segment wise recommendations made using average thumbs up score for households which prefer to grill a specific item.

JSON to Pandas

Pandas and JSON library used to convert json file into CSV file. Json data is first loaded in a dictionary with fields as key and rows as value for each field. Stored into a dump file and then converted to CSV.