

# Analysis of San Diego Gas Prices

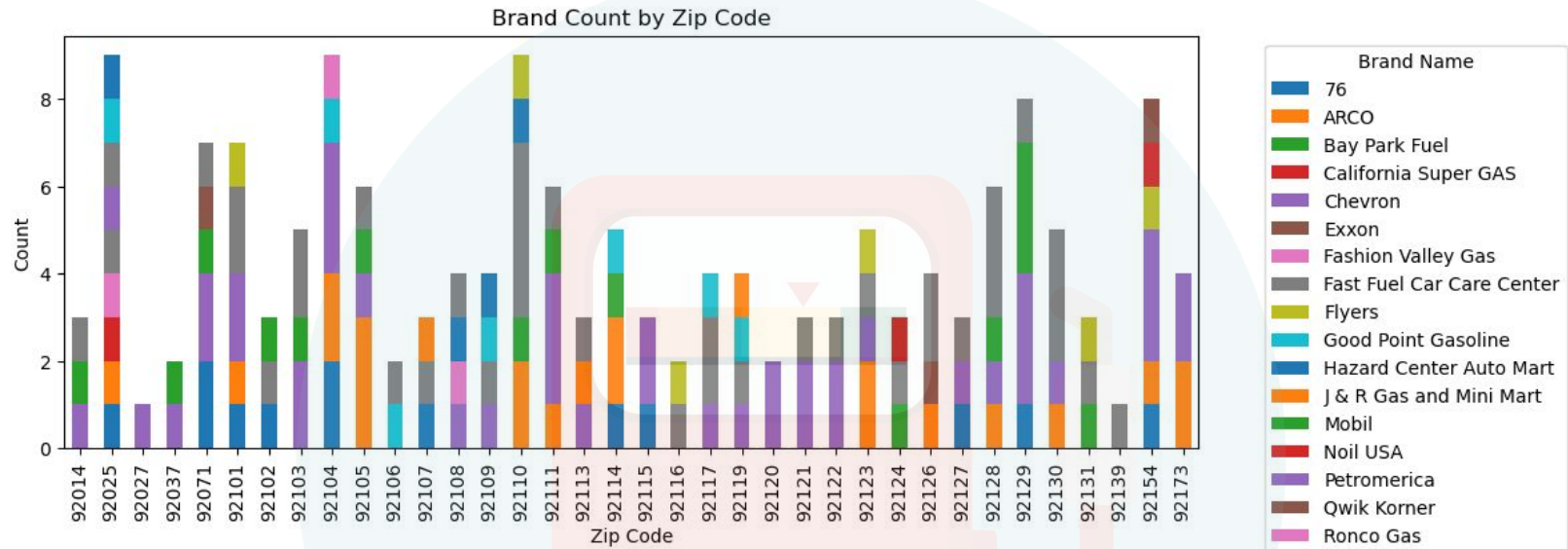
A faint background illustration featuring a green gas pump nozzle and a grey hose on the left. Overlaid on this is a pink line graph with a jagged, upward-trending path, symbolizing fluctuating gas prices.

## Project 1

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# Dataset for analysis

- Data on gas station and their prices from October 4, 2023 by specific zip code was generated by [Gas Prices Scaper](#).
- Data on Median Household Income on specific zip codes in San Diego from 2020 Census and 2021 ACS was found on [simplemaps](#).

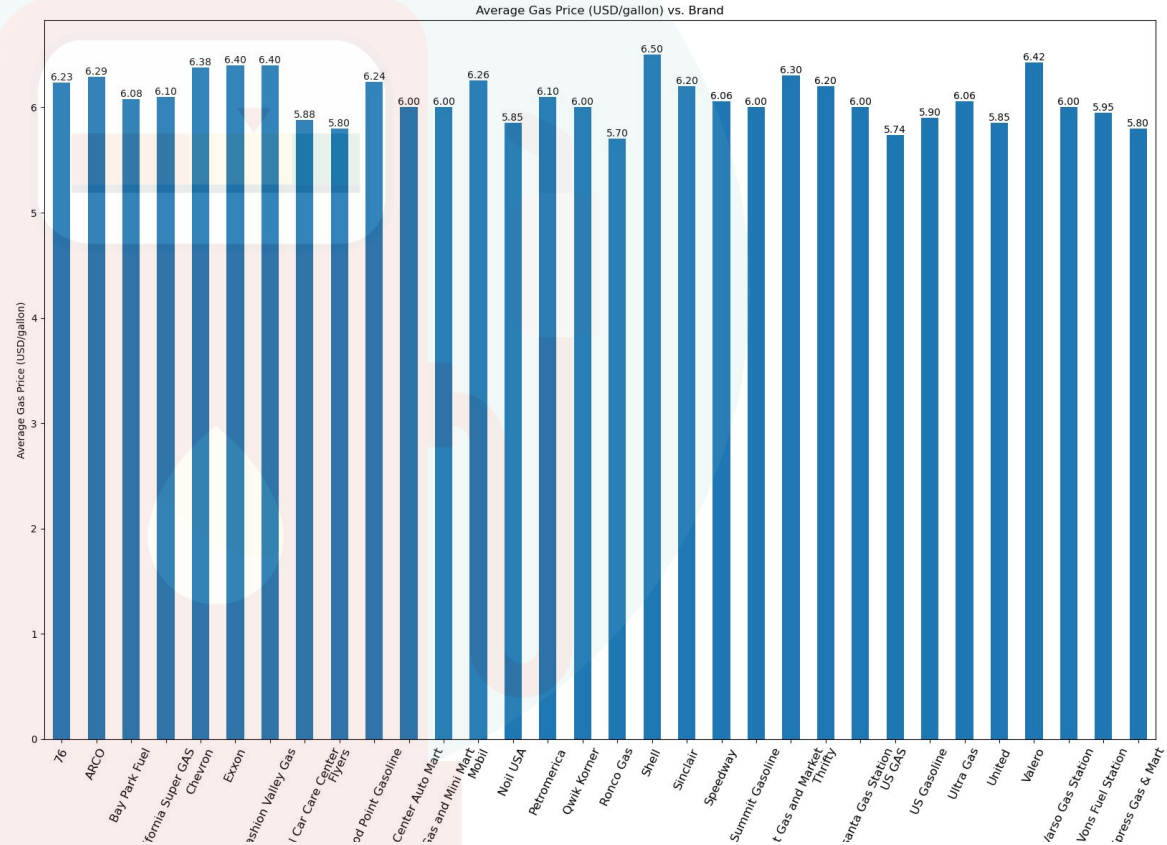


## Gas station brand by Zip Code

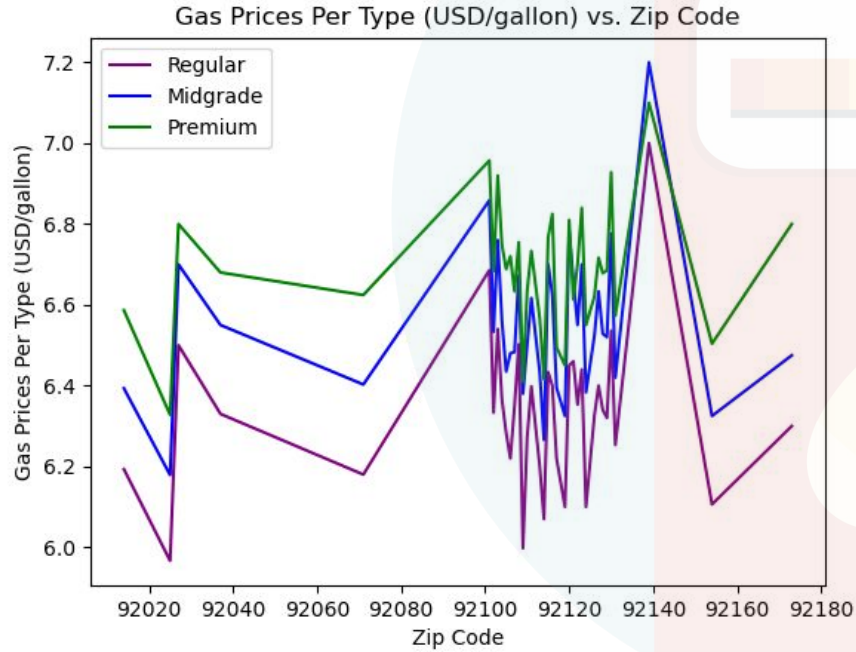
- Identified what brand gas stations were located in each zip code of our dataset.
- 3 zip codes have only 1 brand and the rest had multiple brands

# Average gas price by brand gas station

- What gas station brand has the highest and lowest average gas price?
- We have identified that Shell has the highest average gas price of \$6.50 USD/gallon and the lowest is Ronco Gas at \$5.70 USD/gallon

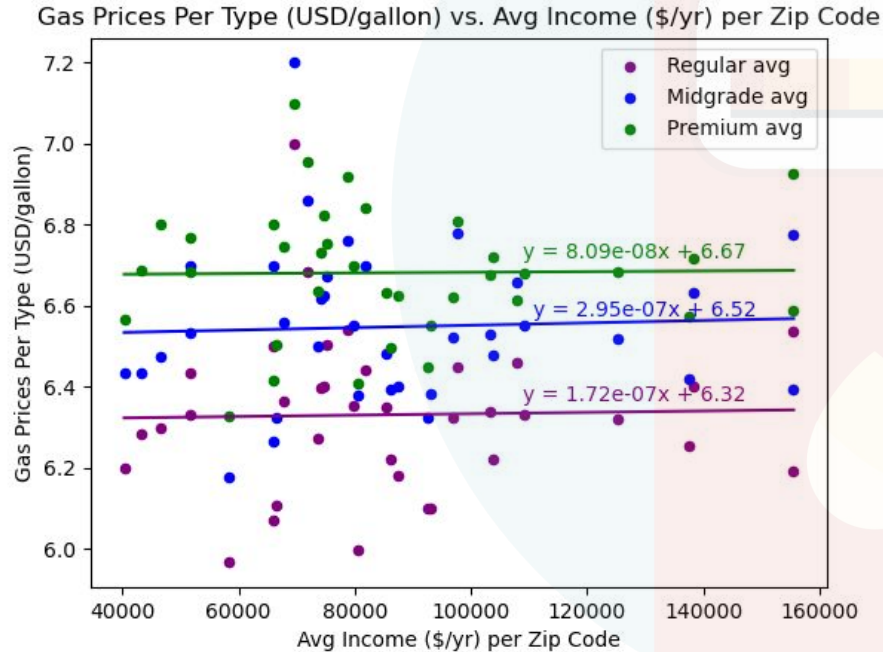


# Gas Prices Per Type vs Zip Code



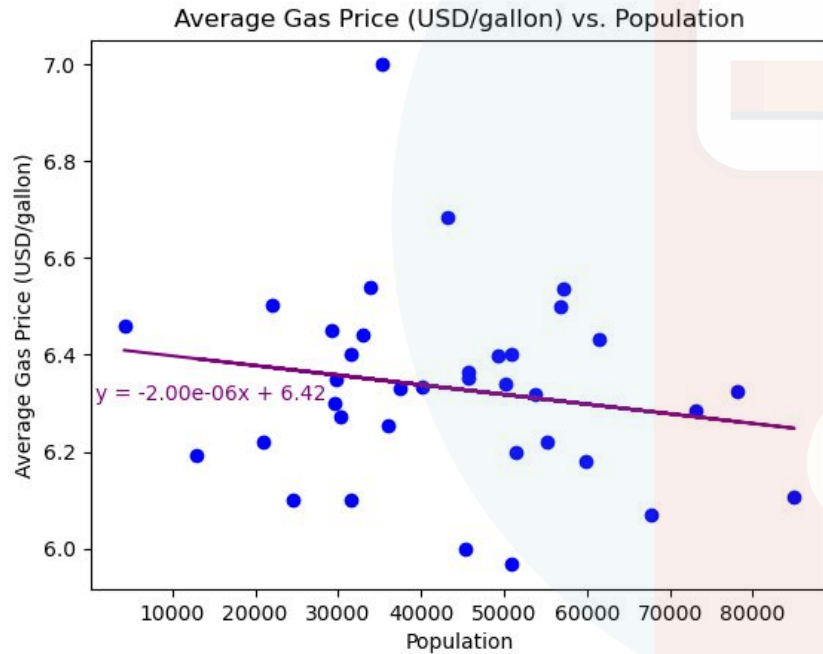
- What is the price difference between regular, midgrade and premium gas types in specific zip codes?
- The line graph shows there is a consistent delta gap between the types of gas.
- Delta gap between gas types are approximately \$0.10 to \$0.20.

# Gas Prices per Type vs Average Income per zip code



- Is there a difference between gas type based on Median Household Income per zip code?
- Data show there is no difference between gas type based on Median Household Income per zip code but it does show that the average gas price of the types have a consistent delta gap.

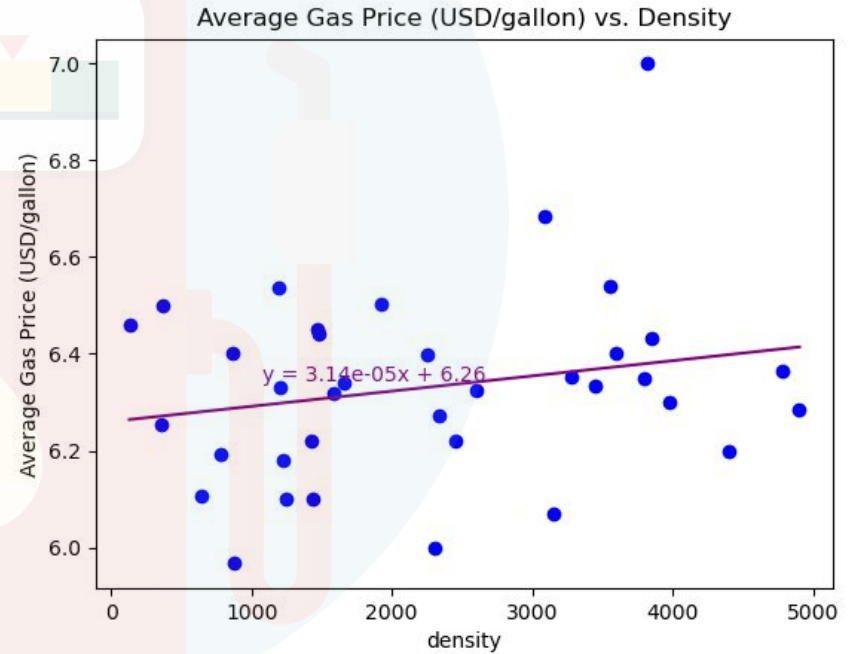
# Average Gas Price vs Population



- Is there a correlation between average gas price and the population?
- There is a weak negative correlation where the average gas prices is lower where the population is higher.

# Average Gas Price vs Density

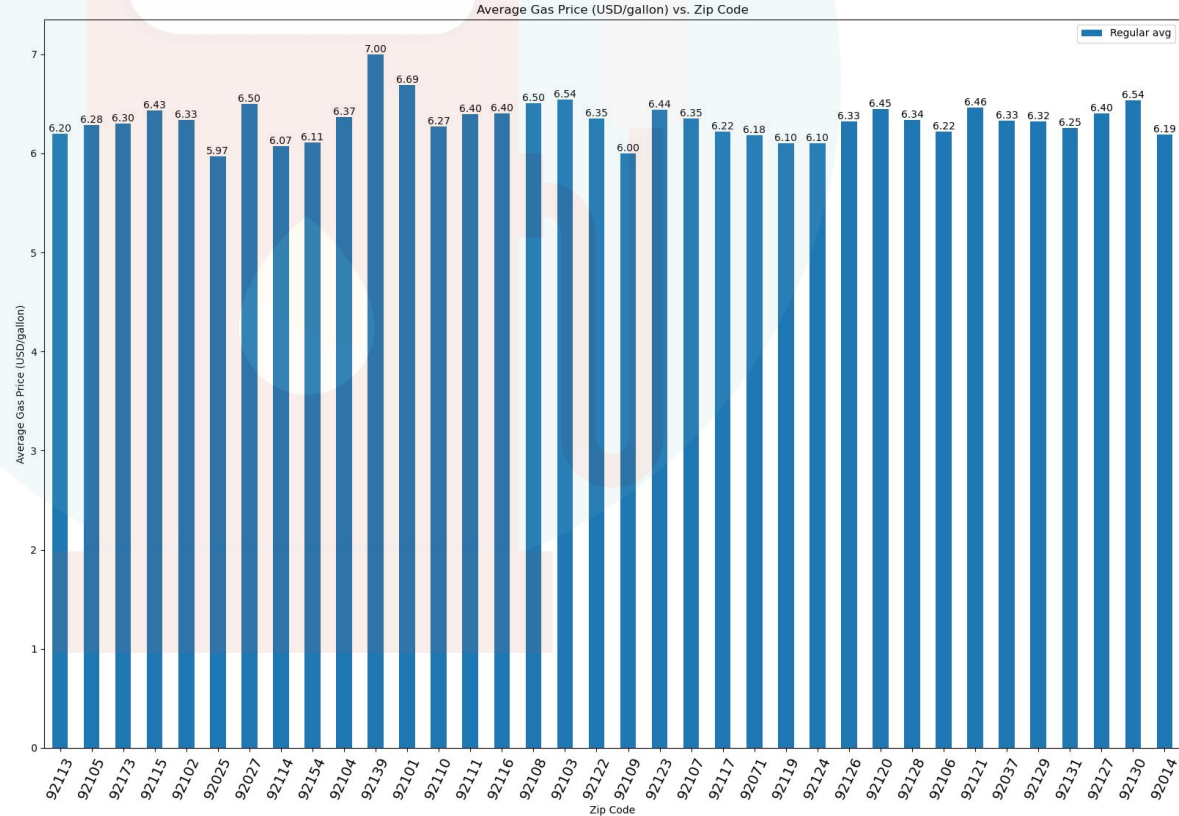
- Is there a correlation between average gas prices and population density?
- There is a very slight positive correlation meaning the higher population density did have a higher average gas price.





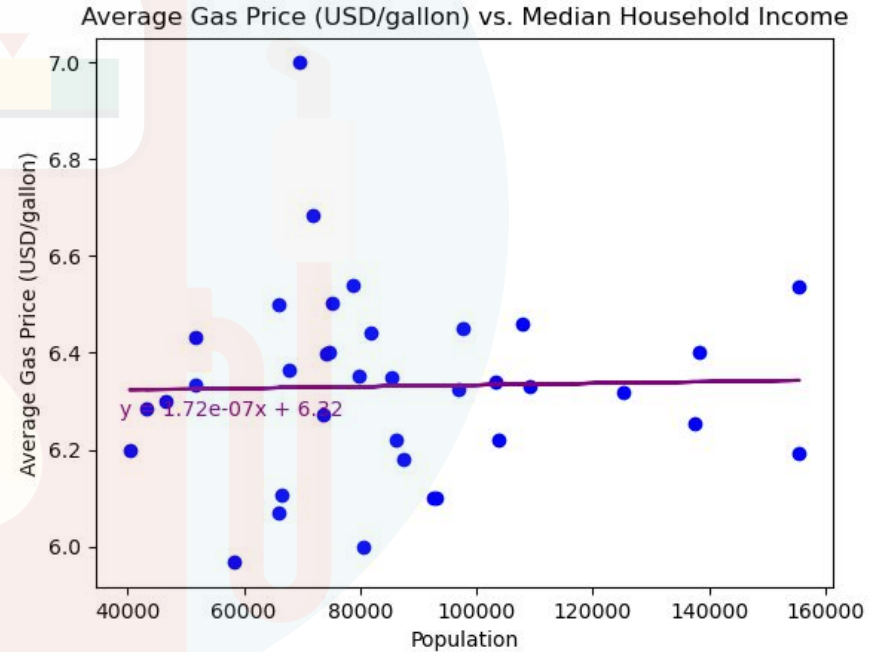
# Average Gas Price vs Zip Code by Median Household Income

- Does the zip code with the highest median Household income have the highest average gas price?
- Zip code from left to right correlate with the lowest to highest median household income.
- Graph indicates that that zip code with the lowest and highest median income are \$0.01 difference with the lowest median income having a higher average gas price.
- The highest average gas price at \$7.00 USD/gallon is zip code 92139 where the household median income is 20% of the total house median income.

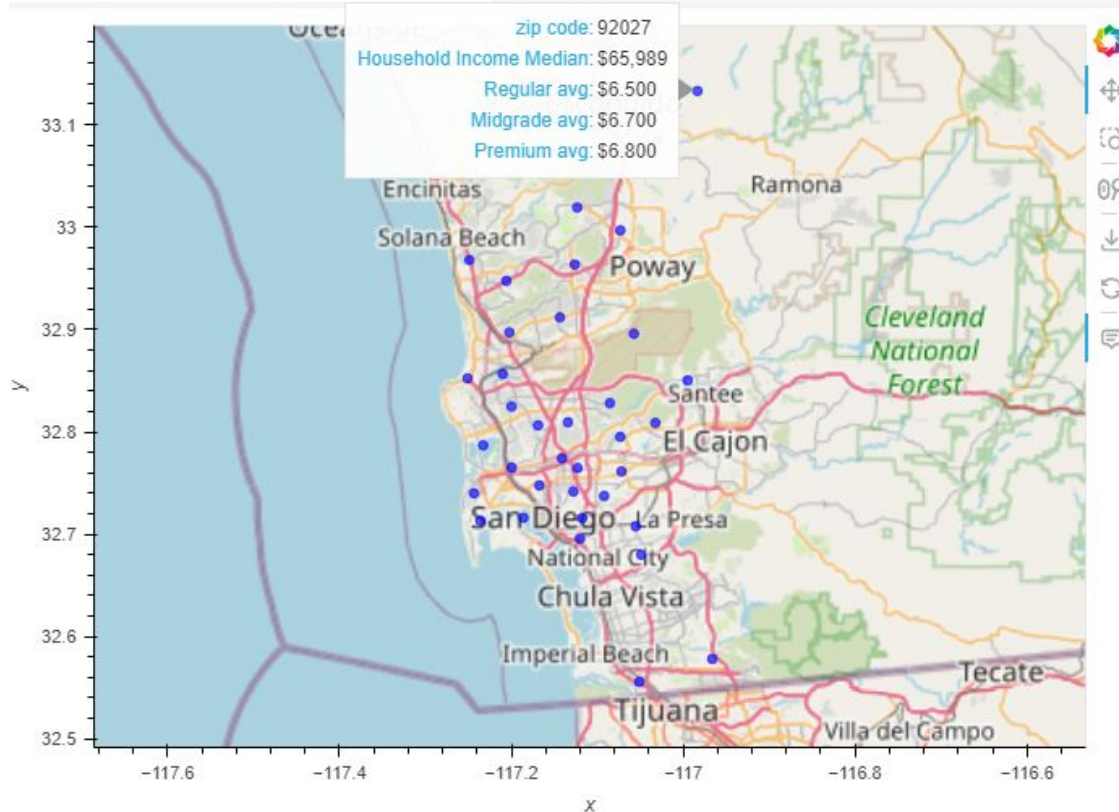


# Average Gas Price vs Median Household Income

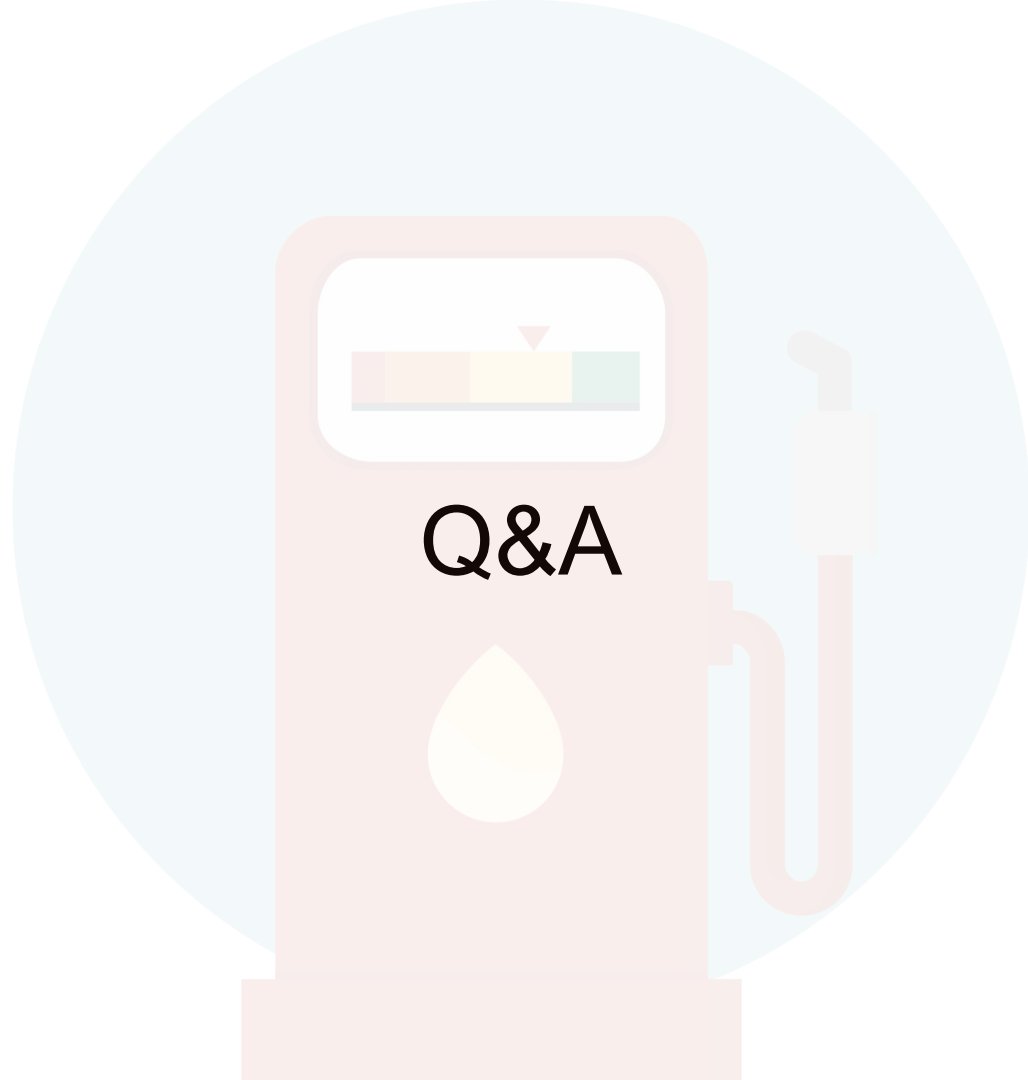
- Is there a correlation between average gas price and the median household income?
- According to our findings there isn't any. The average gas price although has an outlier is somewhat flat.



# San Diego Map of the Gas Stations



- Map of San Diego with the zip code points from our dataset.
- Hover information shows zip code, Median Household Income, Regular Average Gas Price, Midgrade Average Gas Price and Premium Average Gas Price.



A stylized illustration of a pink gas pump with a light blue circular background. The pump has a digital display at the top showing a progress bar with three segments: pink, yellow, and green. A small pink triangle points down at the end of the yellow segment. Below the display is a yellow teardrop-shaped button. A pink hose with a nozzle is attached to the right side of the pump. The text "Thank you!" is centered on the pump's body.

Thank you!