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 Hackathon Project

Pizza vs. Subway Fares

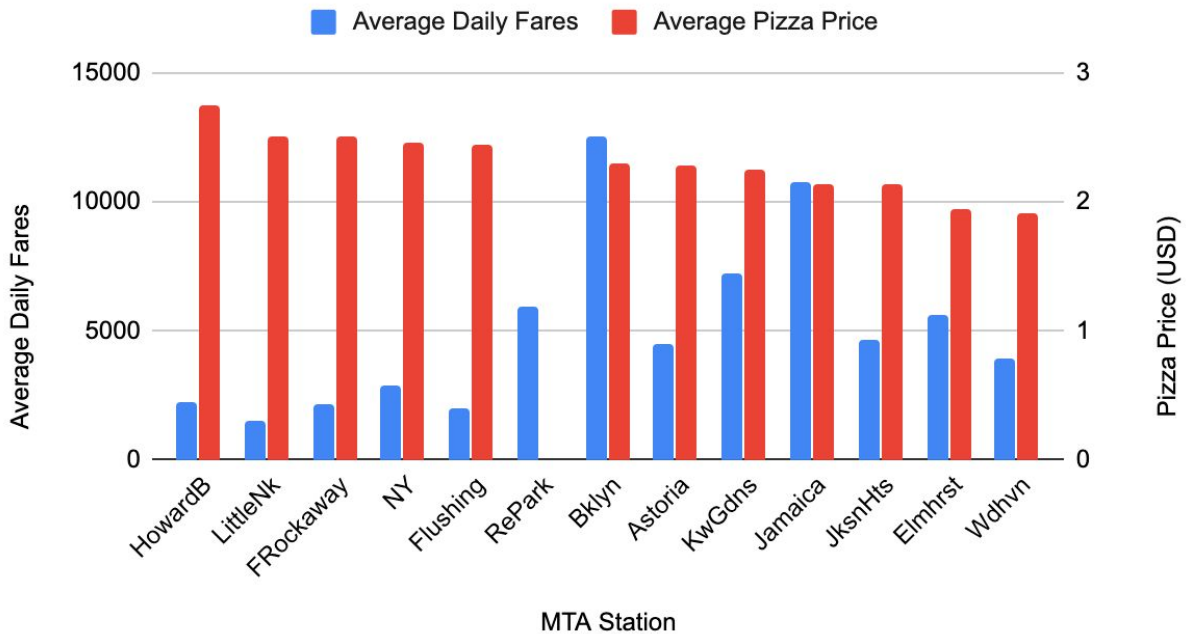
Data table for cost of pizza in each borough:

MTA Station	Borough	Mean	Median	LL	UL
Astoria	Queens	2.281	2.25	1.703	2.858
Brooklyn	Brooklyn	2.301	2.25	1.331	3.272
Far Rockaway	Queens	2.5	2.5	1.086	3.914
Elmhurst	Queens	1.95	2	1.777	2.123
Flushing	Queens	2.435	2.4	1.594	3.276
Howard Beach	Queens	2.75	2.75	2.75	2.75
Jackson Heights	Queens	2.131	2	1.609	2.652
Jamaica	Queens	2.136	2	1.143	3.129
Kew Gardens	Queens	2.25	NA	NA	NA
Little Neck	Queens	2.5	NA	NA	NA
New York	Manhattan	2.456	2.5	1.216	3.696
Woodhaven	Queens	1.917	1.75	1.339	2.494

Data Statistics table:

MTA Station	Min	1st Quartile	Median	Mean	3rd Quartile	Maximum	NA's
Howard Beach	1	28.75	117	2219.51	1999	18149	130
Little Neck	1	46	247	1500	977	10270	169
Far Rockaway	1	43	183	2158	833	25036	N/A
New York	1	53	343.5	2913.8	810.8	18324	166
Flushing	1	37	149	2021	1306	22202	105
RePark	12	292.5	596	5945.2	2514.2	39606	166
Brooklyn	241	881.8	1341	12500.2	3387.5	93779	166
Astoria	16	188.5	319	4496.7	1138.8	27515	166
Kew Gardens	47	363.2	682	7241.1	2923.8	42872	166
Jamaica	1	223	751	10781	5530	70389	137
Jackson Heights	1	45	300	4616	1326	100706	39
Elmhurst	3	148.2	406.5	5618.8	1554	42056	102
Woodhaven	1	67	308	3940	1718	48552	117

Mean Pizza Price and Average Daily Fares for MTA Stations



Graph (1): Mean Pizza Price vs Mean Daily Fares per MTA Stations

1. Where are the locations where the Pizza Principle holds?

In terms of the mean pizza price, Far Rockaway and Little Neck follow the pizza principle. In terms of median, Far Rockaway and New York follow the principle. In each of these cases, the pizza price for each location is exactly 2.50\$, the same price as a subway fare.

2. Where does the Pizza Principle not hold?

For the mean and median values, all other MTA stations not mentioned in the previous answer did not have an average pizza price equal to 2.50\$. These stations do not follow the pizza principle.

3. Are these identified trends reflected in the MTA ride data?

These trends don't appear to have any relation to MTA fare data. Stations that follow the pizza principle don't have any more or less fares than other stations that don't follow the principle. The two values have seemingly no correlation to one another.

4. Does this help us get maximum pizza to the masses in NYC?

While the comparison combined an interesting data set with a creative principle, the pizza principle and the MTA ride data do not seem to be significantly correlated. Therefore, this does not help us get maximum pizza to the masses in NYC. If one were trying to maximize pizza to the masses in NYC, one should look for other associations that do correlate in the communities.

Since price doesn't seem to be a factor in the amount of pizza consumed by the masses in NYC.

An alternative solution could be the accessibility of the pizza itself. It is possible that, while most people who use public transportation can afford a slice of pizza, many simply choose to eat at other locations that are closer and more convenient. Under this hypothesis, pizza could be maximized to the masses by moving pizza parlors closer to MTA stations.

Contributions:

Justin Fleming: Summarised provided data in R, made Graph (1) in excel, and answered data inquiry questions 1, 2, 3, and 4.

Shyann Roberts: Initiated first Zoom, verbalized data for chart, worked through data with group, and answered data inquiry question 4.

Amber Burrell: Helped figure out the R codes with everyone and getting summary statement, recreated the pizza data table, brainstormed how to do the project, and formatted the documents.

Shaira Perez: Attended all group meetings and help brainstorm the project. Also, used Rstudio to open excel table and summarize the data. Added Data statistic table. Created google docs and sheets documents.