Sales Analysis Research Plan

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Introduction

The goal of this analysis is to understand the dynamics of sales and revenue over time this analysis will focus on:

- Revenue trends over time (monthly).
- Key performance indicators (KPIs), such as order volume, revenue per order, and customer retention.
- Changes in how revenue grows across different time periods.
- Top revenue-generating restaurants.
- The impact of education level on purchasing behavior.

Guiding questions

- What are specific seasons or holidays where sales grow for individuals in different educational brackets?
- What are the key performance indicators (KPIs) for evaluating sales success?
- Which quarters may have the most success for each restaurant?
- Which products or categories contribute the most to total revenue?
- Does a users education level influence their order frequency or spending habits?
- What restaurants generate the highest revenue?

Hypothesis

- Sales and revenue increase during peak seasons (ie holidays, promotions)
- Certain food categories will perform better during different seasons
- Fast Food may have a high placement across all educational and financial brackets
- Fast food may high volume but generate less revenue per order
- People with higher education tend to eat out at more expensive restaurants compared to those in lower educational brackets. (fast food may be an outlier)

Required Data and Preparation

- Orders.csv will be able to pull revenue and find out times for when ordering peaks in a month
- Restaurants.csv will show which restaurants generate the most revenue.

- Users.csv will give user information like education, and other demographics to analyze
- Data will be cleaned by removing duplicates and NULL values
- Tables will be joined to help calculate revenue per customer and by demographic.
- Figuring out how much revenue is maded per customer and behaviors associated by time and per restaurant

KPI's and visualizations

- Total Revenue Sum of all order values over time
- Total orders per restaurant
- Revenue and Order Frequency by Education Level Measuring the impact of education on purchasing habits.
- Line Graphs
  - Revenue
  - Orders over time
- Bar graphs
  - Average order values by education
  - Highest revenue generatring restaurants
- Histogram
  - Correlation between sales and education

End state

- Create better marketing strategies during peak seasons
- Optimize pricing during peak times of the year
- Develop a better forecasting for restaurants to better equip themselves during peak seasons for sales