Project Plan

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Project : Coffee Shop Sales

Overview:

Coffee can be extremely addictive, but depending on the drink, some items are not being sold as often. To optimize sales, I want to analyze the sales data of coffee shops to determine which drinks should be removed from the menu.

This is what I would like to do because I just love coffee and good business. Coffee shops must optimize their menu offerings to balance profitability, customer demand, and operational efficiency. By analyzing sales data, we can identify underperforming drinks, assess the viability of introducing seasonal drinks, and evaluate the performance of coffee shops to maintain or enhance consistent revenue streams.

Problem Statement : I will analyze all sales transactions to determine when most sales occur for business owners. Based on this analysis, I will provide different approaches to help expand users' businesses and increase sales.

Measurable Task : I will examine profits for each portion of the week to determine where the lowest profits are. Based on the analysis, we will provide suggestions to improve sales. If these changes are implemented, we can analyze how the changes have assisted coffee sales. I will analyze the transactions over a 7 month period and after the changes are implemented, I would like to loop back after 2 to 3 months to see how the ideas affected revenue. I will measure how the changes affect the weekday vs weekend and different times of the day.

Data Preparation

- Import and clean the data to handle missing or inconsistent values.
- Combine multiple datasets if needed, such as sales data, customer feedback, and seasonal trends.
- Reshape the data for time series analysis, ensuring proper date formatting and inspect the sales at appropriate intervals.

Descriptive Analysis

- **Sales Trend Analysis:** Examine overall sales trends across all coffee shops.
- **Drink-Level Analysis:** Identify bestsellers and underperforming drinks.
- **Profitability Analysis:** Use profit margins to assess which drinks are most and least profitable.

Predictive Analysis

- **Time Series Forecasting:** Use multivariate time series models (SARIMA?) to predict future sales across different drinks and coffee shops.
- (Not sure if this is necessary or it's necessary after the time series) **Scenario Testing:** Simulate adding or removing drinks and their impact on overall revenue and customer retention.

Insights for Optimization

- Identify low-performing drinks and recommend removal or revamping (rebranding or price changes).
- Evaluate which coffee shops have the highest and lowest sales, providing tailored improvement suggestions.
- Assess the feasibility and potential revenue uplift of seasonal drinks for specific coffee shops based on historical seasonal trends.

Scaling and Future Strategy

- Recommend scaling strategies for high-performing coffee shops, such as menu expansion or targeted marketing.
- Highlight opportunities for underperforming shops, such as cost optimization or restructured drink offerings.

Conclusion/ Deliverables:

In the analysis, I will analyze the sales of every coffee shop, verify which coffee produces the most sales, verify which drinks need to be removed and verify if seasonal drinks will be a good option for which coffeeshop. Then I will provide an analysis of what was discovered in the data and how we can optimize and perhaps improve business.

List of Actionable items:

- Provide visual reports.
- Sales projections.
- Provide a possible list to remove drinks or even a season drink plan.
- Analyze which coffeeshops that may need improvements

Title	Coffee Shop Sales on less sold coffee drinks
Data Link	https://www.kaggle.com/code/ahmedabbas757/coffee-shop-sales/input