\*\*Project Brief: Analyzing Agricultural Product Pricing\*\*

\*\*1. Project Overview:\*\*

- Objective: Analyze and understand the pricing trends of agricultural products across different cities.

- Dataset: CSV file containing information on product name, date, farm price, and retail prices in various cities.

\*\*2. Dataset Information:\*\*

- Columns:

- ProductName: Name of the agricultural product.

- Date: Date of pricing information.

- FarmPrice: Price at which the product is sold at the farm.

- AtlantaRetail: Retail price in Atlanta.

- ChicagoRetail: Retail price in Chicago.

- LosAngelesRetail: Retail price in Los Angeles.

- NewYorkRetail: Retail price in New York.

- AverageSpread: Percentage difference between farm price and the average retail price.

\*\*3. Objectives and Questions:\*\*

- \*\*3.1 Overall Analysis:\*\*

- What are the key trends in farm prices across different products and dates?

- How do retail prices vary among different cities?

- Is there any noticeable seasonality or pattern in the data?

- \*\*3.2 Product-Specific Analysis:\*\*

- Identify products with the highest and lowest farm prices.

- Which products have the highest and lowest average retail prices?

- Analyze the spread percentage for each product.

- \*\*3.3 City-Specific Analysis:\*\*

- Determine the city with the highest and lowest average retail prices for each product.

- Investigate the cities where the spread percentage is notably high.

\*\*4. Data Cleaning and Preprocessing:\*\*

- Convert date column to a standardized format.

- Convert monetary values to numerical format (remove '$' signs).

- Check for and handle missing or inconsistent values.

- Ensure data types are appropriate for analysis.

\*\*5. Exploratory Data Analysis (EDA):\*\*

- Generate summary statistics for numerical columns.

- Visualize trends in farm prices, retail prices, and spread percentages.

- Explore correlations between variables.

\*\*6. Key Findings and Insights:\*\*

- Summarize significant patterns, outliers, or trends discovered during the analysis.

- Provide insights into factors influencing pricing dynamics.

\*\*7. Recommendations:\*\*

- Suggest potential actions or strategies for farmers or retailers based on the analysis.

- Identify areas for further investigation or data collection.

\*\*8. Reporting and Documentation:\*\*

- Create a detailed report with visualizations, tables, and explanations.

- Share findings and recommendations in a clear and understandable manner.

\*\*9. Tools and Technologies:\*\*

- Specify the tools and technologies to be used for data analysis (e.g., Python, Pandas, Matplotlib).

\*\*10. Timeline:\*\*

- Define a realistic timeline for completing each phase of the project.

This project brief outlines the scope, objectives, and key tasks for analyzing the agricultural product pricing dataset. Adjustments can be made based on specific goals and requirements.