

2023 Data Derby Challenge Questions



Novice Level:

1. What are the patterns of price trend for fruits, animal products, grains and dairy products? Are they in similar trends (Describe what you observe)? Why? (Provide your insights) You may focus on recent years.
2. Within each food category (for example, grains), are all the food products in each category following the same pattern (Describe what you observe)? Why? (Provide your insights) You may focus on recent years.
3. Is the trend of food price during the pandemic (2020-2022) different from the trend prior to the pandemic? Is that pattern consistent among all food categories? why? (provide your insights)
4. Relate the inflation rate data to the food price, is there any correlation between inflation and each types of food? You may focus on recent years. Are there any other reasons that the food prices are increasing? Provide your insights on what you observed.
5. Relate the CPI and PPI to the food price change, is there any correlation between CPI and food price change? Between PPI and food price change? You may only use one or both of the CPI data, and one or both of the PPI data.

Please share with the judges any additional interesting findings from your analysis, if any. Please summarize your data processing and data cleaning methods, if any.

Advanced Level:

1. What are the patterns of price trend for fruits, animal products, grains and dairy products? Are they in similar trends or are they statistically significantly different (Describe what you observe)? Why? (Provide your insights) You may focus on recent years.
2. Within each food category (for example, grains), are all the food products in each category following the same pattern (Describe what you observe)? Are they statistically significantly different? Why? (Provide your insights) You may focus on recent years.
3. Is the trend of food price during the pandemic (2020-2022) different from the trend prior to the pandemic? Is that pattern consistent among all food categories? why? (provide your insights)
4. Relate the inflation rate data to the food price, is there any correlation between inflation and each type of food? You may focus on recent years. Are there any other reasons that the food prices are increasing? Provide your insights on what you observed.
5. Relate the CPI and PPI to the food price change, is there any correlation between CPI and food price change? Between PPI and food price change? You may only use one or both of the CPI data, and one or both of the PPI data.
6. Predict the food prices in all categories for the next two years (2023 and 2024). You may use any data that you found in addition to what have been provided from Data Derby.

Please share with the judges any additional interesting findings from your analysis, if any. Please summarize your data processing and data cleaning methods, if any.