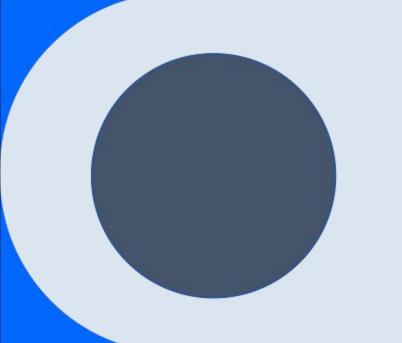
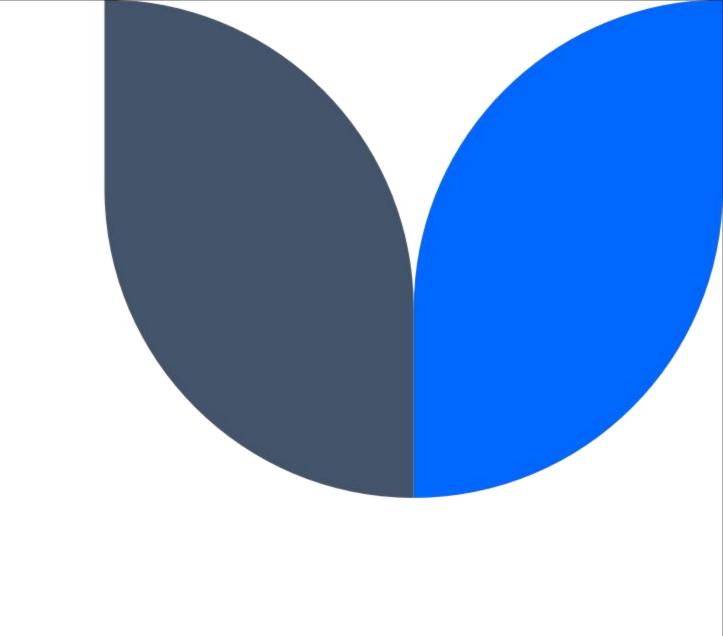
LEVERAGING DATA FOR EFFECTIVE
PRICE FORECASTING AND CREDIT
MANAGEMENT FOR VEGETABLE
DISTRIBUTOR



Aditya Jaiswal 22F3002960



#### About the business

- Kanhaiyalal D Jaiswal (Wholeseller Merchant of Onion, Potato) is a dynamic and customer focused vegetable supplier located at Mulund- W, Mumbai owned and operated by Mr Rajkumar Jaiswal.
- It specializes in the wholesale and retail distribution of high-quality potatoes and onions.
- Established in 2010, the shop has grown to become a trusted name in the vegetable supply industry, catering to both B2B and B2C market.
- The shop employs a total of 7 staff members which includes 1 cashier, 3 workers, and 3 delivery personnel.



# Challenges

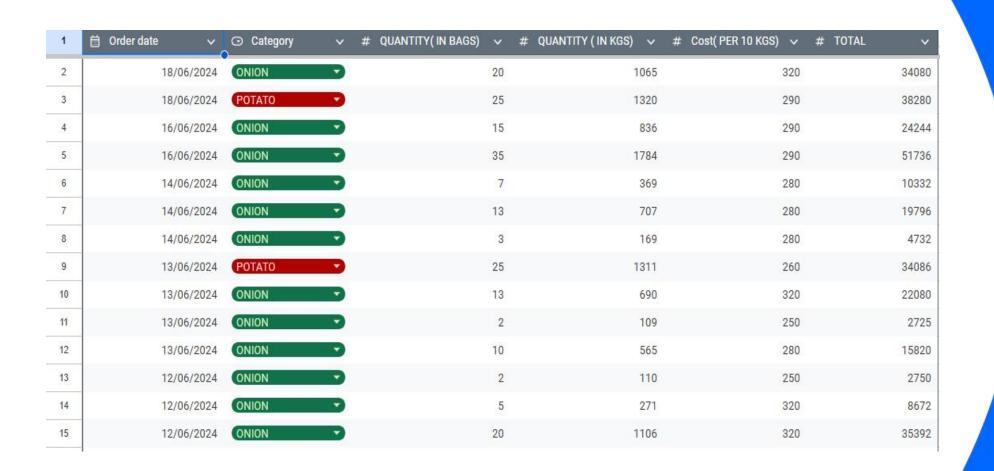
Price Changes
due to
Seasonal
Variation

Price Fluctuation due to unpredictable we ather and seasonal changes Inadequate
Tracking of Credit
Transactions and
Balances

No standardized means of tracking the credit transactions and managing outstanding balances

### Data Overview

- Data provided by the owner was from June 2023 - June 2024.
- This dataset contains detailed information about orders for onions and potatoes, including dates, order types, quantities, prices, and total bills over a one-year period.
- 594 rows 6 columns



## Analysis Methods

# Sales Contribution Analysis

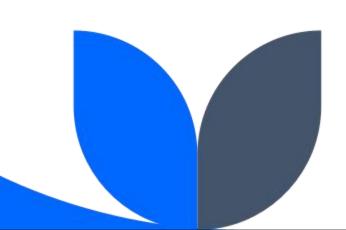
 To find out which product results in greater sales

# Time Series Analysis

- Tracking the sales of onion and potatoes over the span of 12 months.
- Find trends during peak and non-peak months.

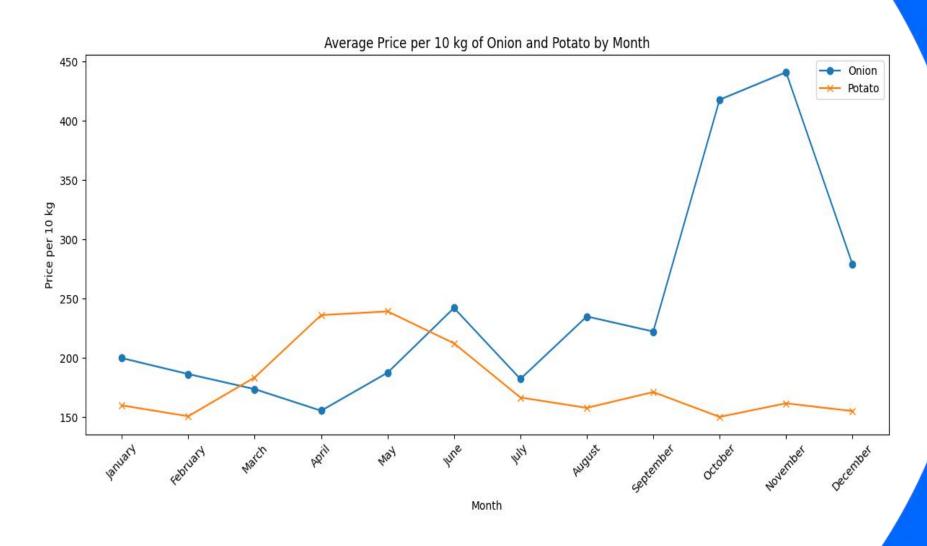
#### Price Forecasting Prediction Model

- Predict the price of onion and potatoes for the upcoming months based on historical rates and data.
- Use Linear Regression model due to its simplicity and scalability



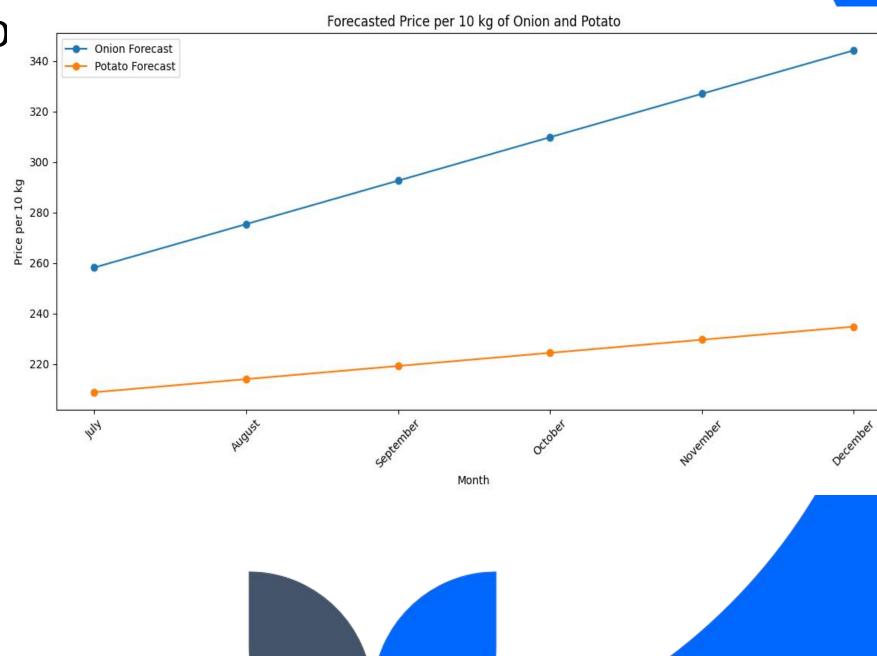
#### AVERAGE PRICE TREND

- The line graph illustrates the price trends for 10 kg of onions and 10 kg of potatoes over the course of a year.
- Onion prices experienced significant fluctuations, starting at around ₹200 inJanuary and peaking dramatically in October at over ₹500 per 10 kg, followed by a sharp drop in December to around ₹300.
- Potato prices, began at approximately ₹150 in January, peaked in June at nearly ₹250, and then steadily declined, staying around ₹150 to ₹200 for the rest of the year



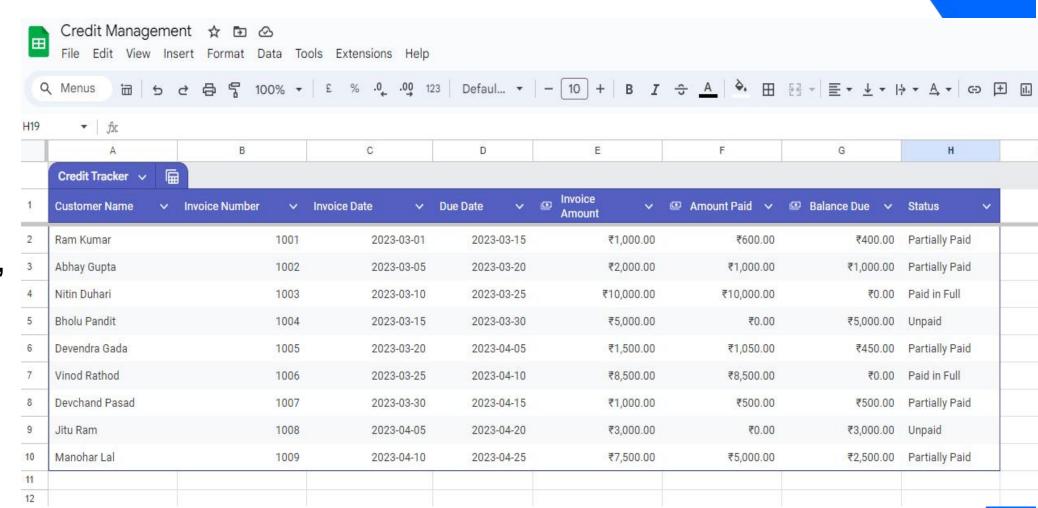
#### PRICE FORECASTING

- Onions, being more perishable and seasonally dependent, exhibit greater price volatility. They are more sensitive to changes in supply and demand, as well as external factors like weather, transportation costs, and market speculation
- Potatoes, with their longer shelf life and stable production patterns, show more resilience to such factors, resulting in a slower and more controlled price increase.



#### CREDIT MANAGEMENT

- The Credit Management system in Google Sheets tracks customer invoices, payments, and outstanding balances. Key columns include Customer Name, Invoice Number, Invoice Date, Due Date, Invoice Amount, Amount Paid, Balance Due, and Status (e.g., Paid in Full, Partially Paid, Unpaid).
- It provides a clear overview of payment progress and helps identify overdue invoices for timely follow-ups, ensuring effective financial management and credit tracking.



#### Recommendations

#### PRICE FLUCTUATION

Investment in Cold
Storage and Warehousing
Facilities

Diversification of Sourcing
Locations and Cultivation in
AlternativeRegions

Introduction of
Processed and ValueAdded Products

#### **CREDIT MANAGEMENT**

Establish Clear Credit Policies

Credit Monitoring and Alerts

Regular Review of Credit and Financial Data

# Thank you!