PROJECT FINAL REPORT

TEAM ID : A6634E4161AF53DB3A7430CEF9AEA551
TEAM LEAD : Lakshmi Narayanan
TEAM MEMBER 1 : Suraj pradeepkumar
TEAM MEMBER 2 : Sameer Khan
TEAM MEMBER 3 : Nallasamy K

PROJECT NAME: Estimation of a Business Project

1.INTRODUCTION:

PROJECT OVERVIEW:

The Dairy Goods Sales Dataset, spanning 2019-2022 in specific regions of India, offers valuable insights for dairy industry stakeholders. This data enables analysts and researchers to assess farm performance, sales patterns, and product quality. By investigating factors such as location, cow population, and storage conditions, this dataset facilitates the development of data-driven strategies. However, users should acknowledge potential intentional data variations due to its creative license.

The dataset supports optimization of inventory management, predictive modeling for demand forecasting, and pricing strategies in the dairy market, thus contributing to informed decision-making and industry growth.

PURPOSE: The purpose of the Dairy Goods Sales Dataset is multifaceted and extends to various stakeholders, including researchers, analysts, businesses, and the dairy industry itself.

First and foremost, this dataset serves as a comprehensive resource for analysts and researchers, enabling them to delve into critical aspects of the dairy industry. It supports the study of dairy farm performance by location, size, and cow population, providing insights into factors that affect productivity. Additionally, it offers a unique opportunity to explore sales and distribution patterns, facilitating the identification of best-selling products, market share analysis, and the understanding of regional variations.

For businesses within the dairy industry, this dataset is invaluable for optimizing operations. By studying storage conditions and shelf life, they can minimize product wastage and

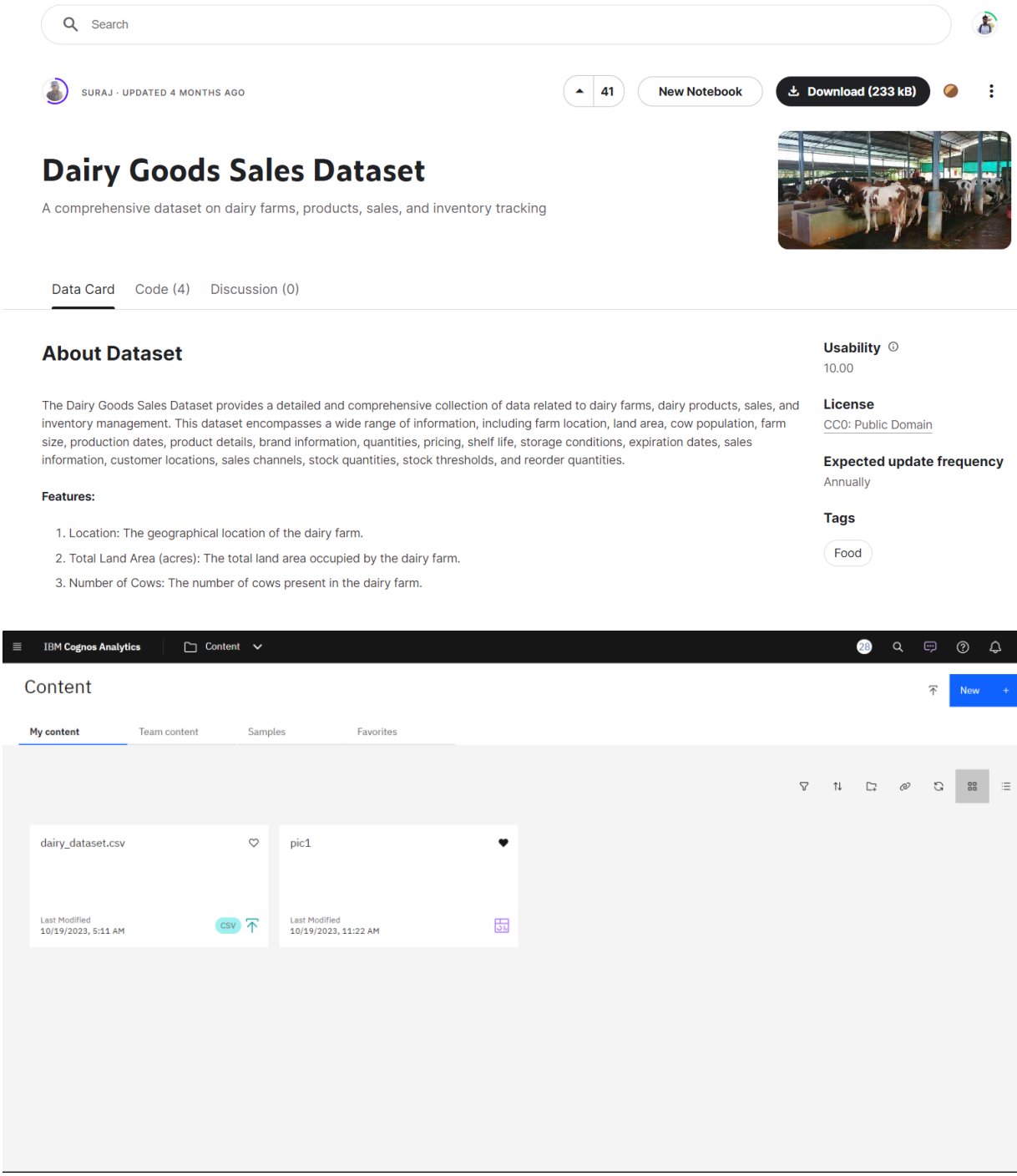
reduce costs. Understanding customer preferences and behavior allows for more targeted marketing and product development, enhancing customer satisfaction and loyalty.

Furthermore, the dataset aids in inventory management by tracking stock quantities, minimum thresholds, and reorder quantities. This is crucial for reducing inventory costs and ensuring product availability.

Ultimately, the overarching purpose is to empower stakeholders in the dairy industry with data-driven insights. This supports better decision-making, improves operational efficiency, and fosters industry growth by addressing challenges and optimizing strategies.

2..Data Collection & Extraction From Database:

To conduct the analysis of financial independence, a systematic approach to data collection and extraction from the Kaggle database will be implemented

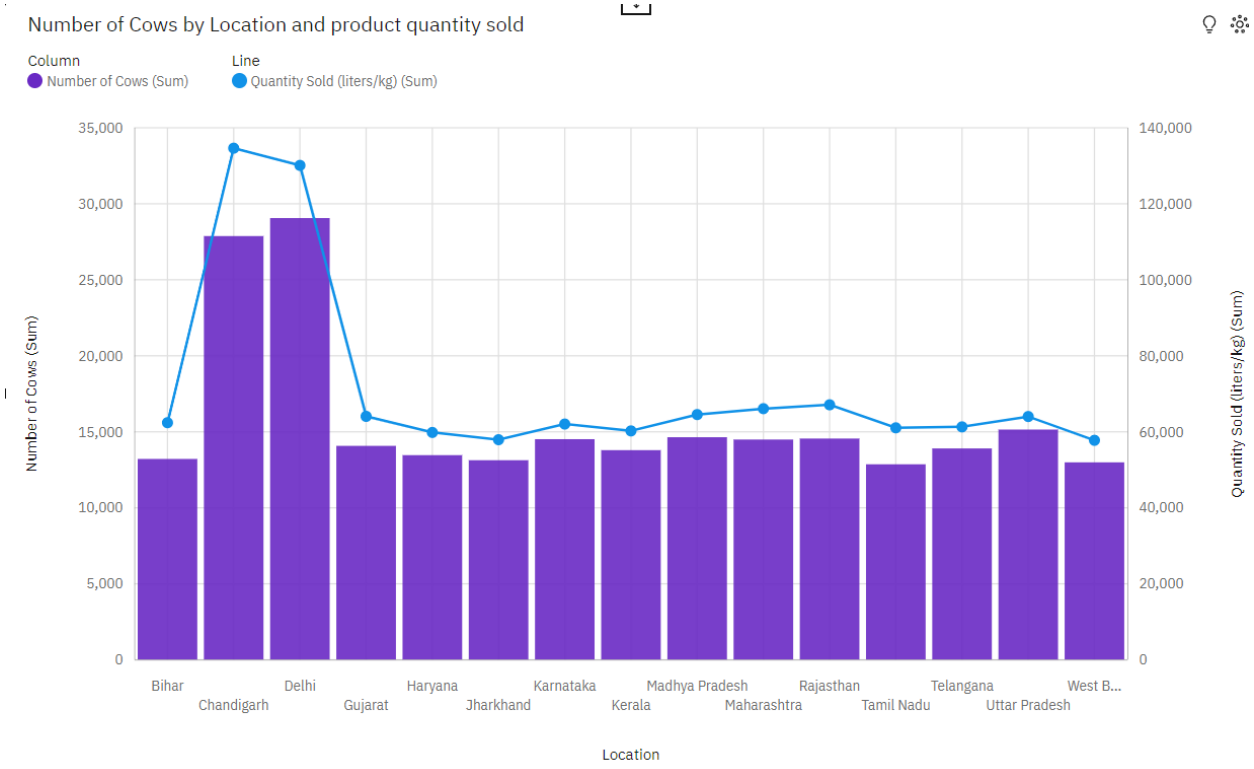


3. 12 VISUALIZATION USING IBM COGNOS ANALYTICS:

1. Number of cows by location and quantity of sold items

- Chandigarh and Delhi having highest number of cows.

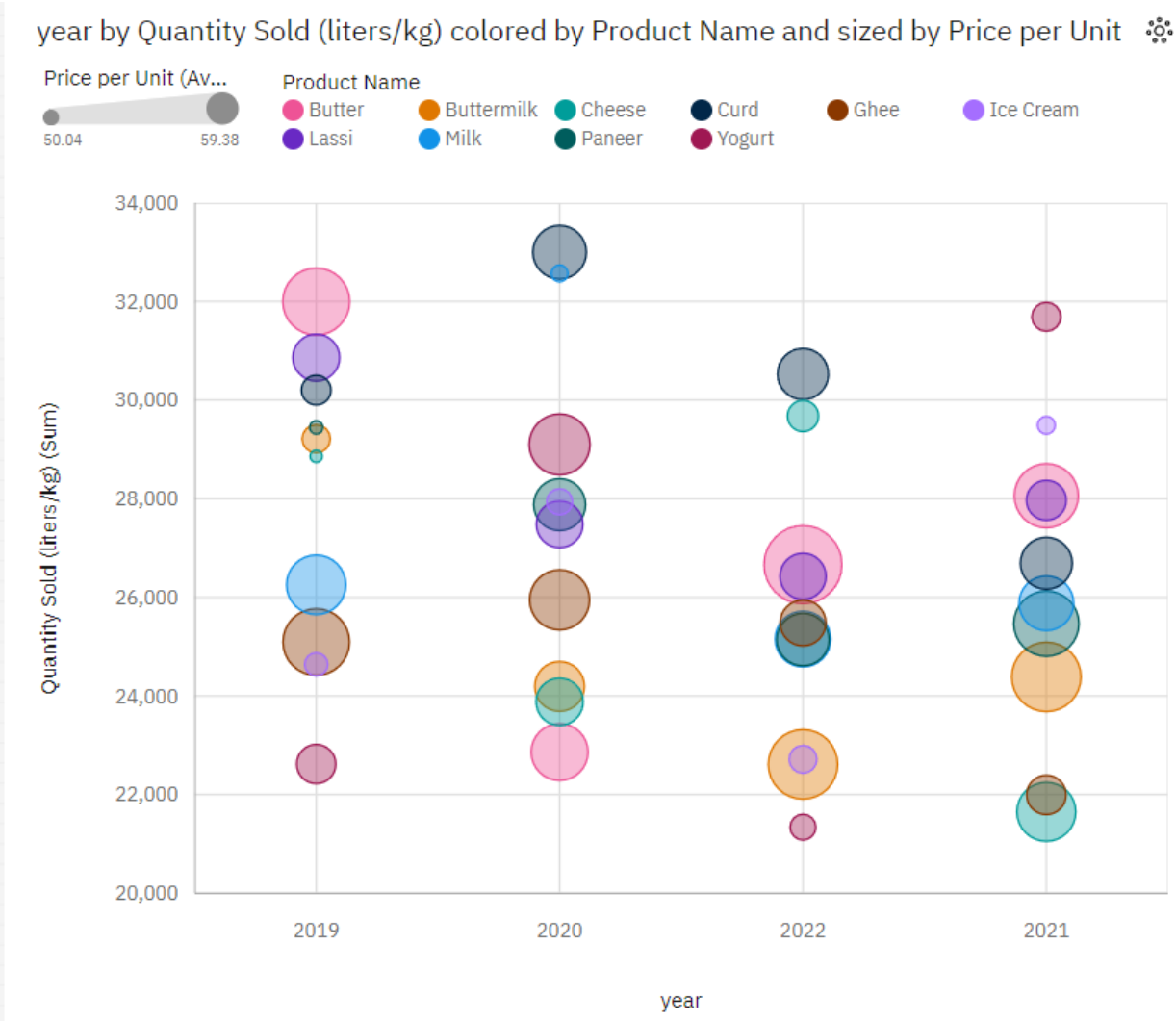
- Though the cows in Chandigarh are lesser than Delhi but the sales of milk products in Chandigarh is more than Delhi.
- Tamil Nadu, Bihar and West Bengal having lowest number of cows



2. Product sold by Quantity Sold (liters/kg) in year, colored by Product Name and sized by Price per Unit

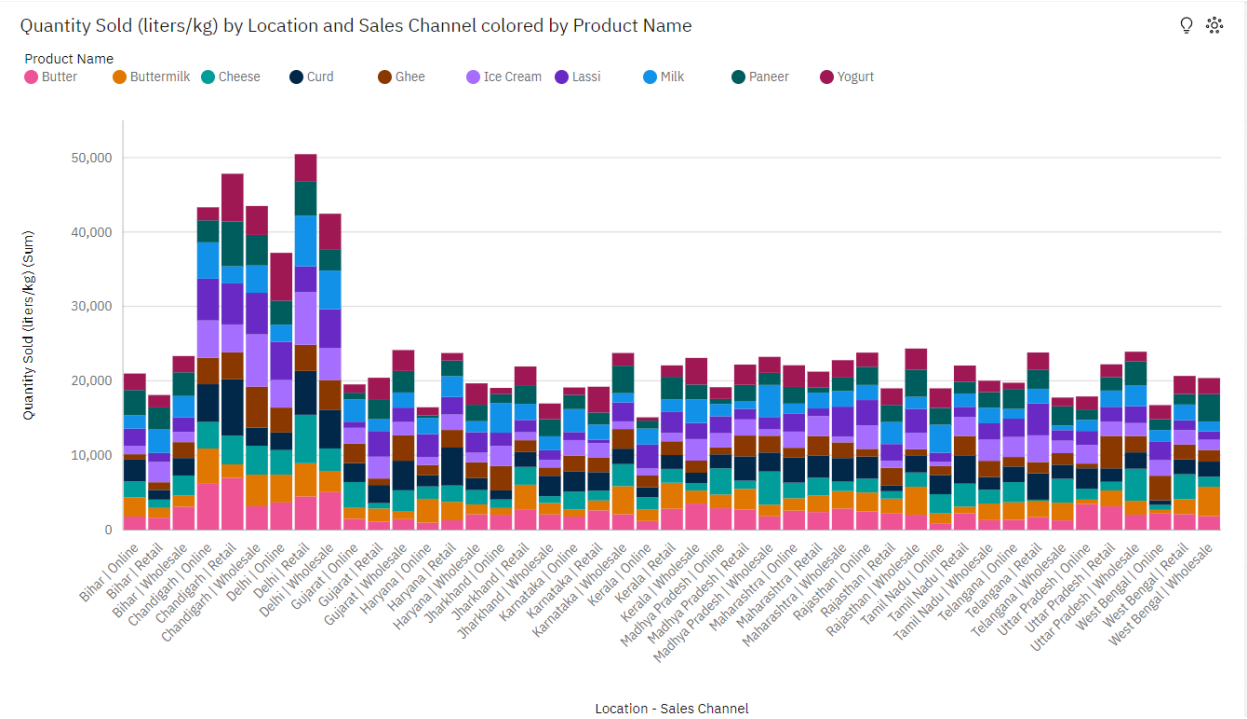
- We can see curd sold quantity is 32,997 it was maximum of all time and it's price per unit is 55.92.

- In 2019 since ice cream has price per unit is 50.84 it was 2nd most sold item with quantity 29.489.
- Cheese sales were exponentially decreased when it's price was increased in 2019.

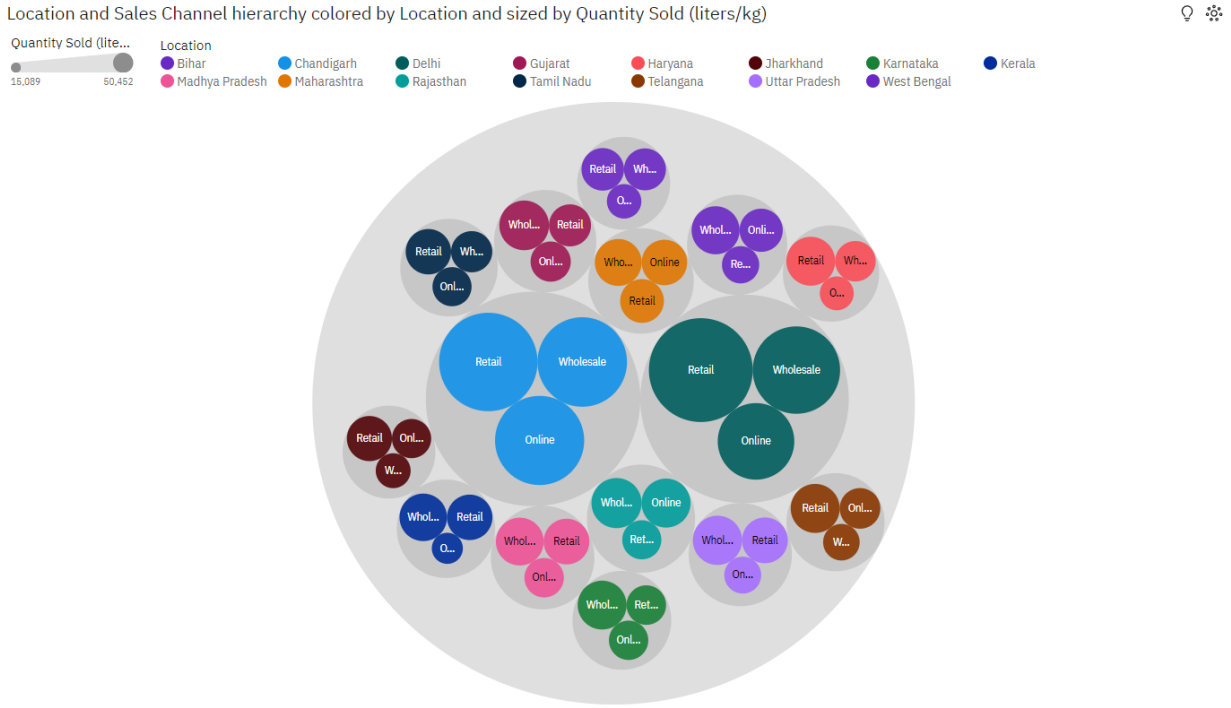


3. Quantity of Product sold in locations with 3 channels(online/retail/wholesale).

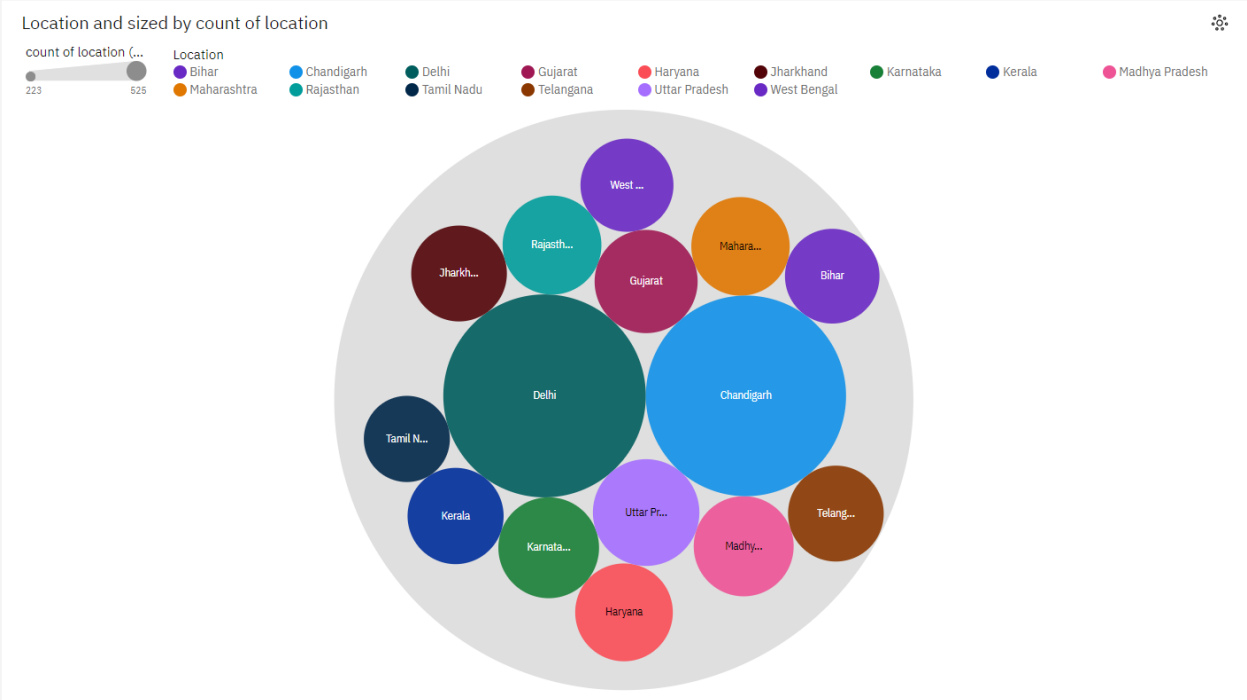
- Delhi having high demand of milk product products mostly milk in retail channels.
- Sales in kerala on online having the lowest sales mostly in yogurt.
- The highest sales of Butter was from chandigarh from retail channels



4. Location and Sales Channel hierarchy colored by Location and sized by Quantity Sold (liters/kg).



5. Location and sized by count of location



4.STORY:

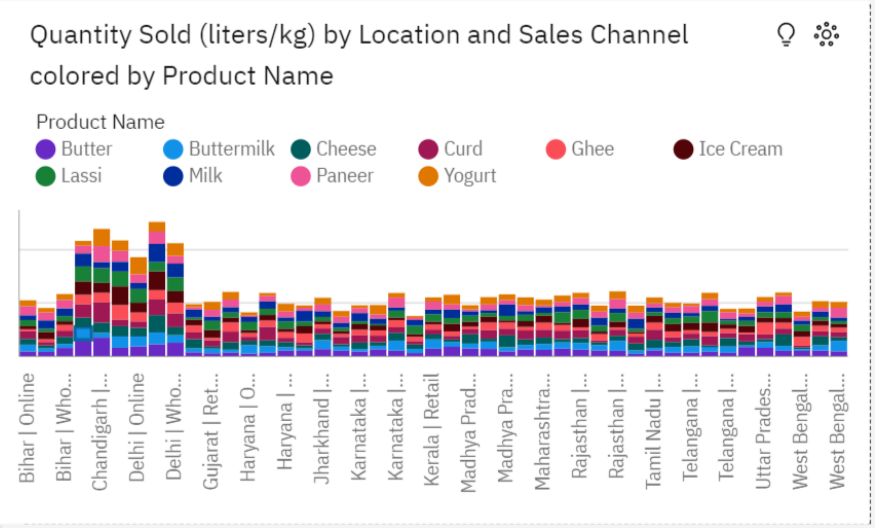
A data story is a way of presenting data and analysis in a narrative format, with the goal of making the information more engaging and easier to understand.

A data story typically includes a clear introduction that sets the stage and explains the context for the data, a body that presents the data and analysis in a logical and systematic way, and a conclusion that summarizes the key findings and highlights their implications. Data stories can be told using a variety of mediums, such as reports, presentations, interactive visualizations, and videos.

STORY SCENE 1:

Quantity of Product sold in locations with 3 channels(online/retail/wholesale)

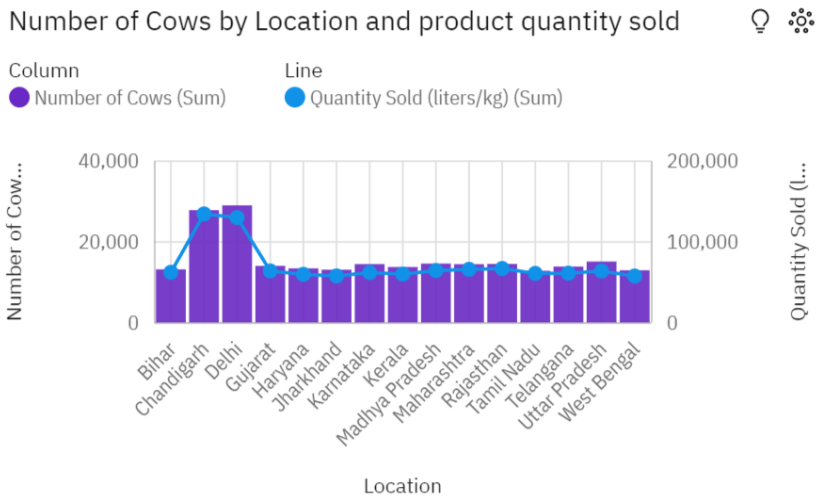
- Delhi having high demand of milk product products mostly milk in retail channels.
- Sales in kerala on online having the lowest sales mostly in yogurt.
- The highest sales of Butter was from chandigarh from retail channels



STORY SCENE 2:

Number of cows by location and quantity of sold items

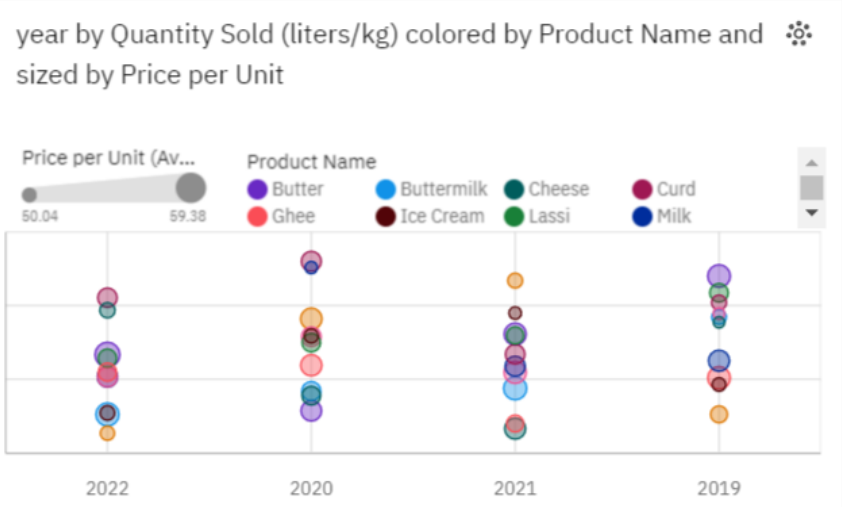
- Chandigarh and Delhi having highest number of cows.
- Though the cows in chandigarh are lesser than Delhi but the sales of milk products in chandigarh is more than delhi.
- Tamil nadu, Bihar and West Bengal having lowest number of cows



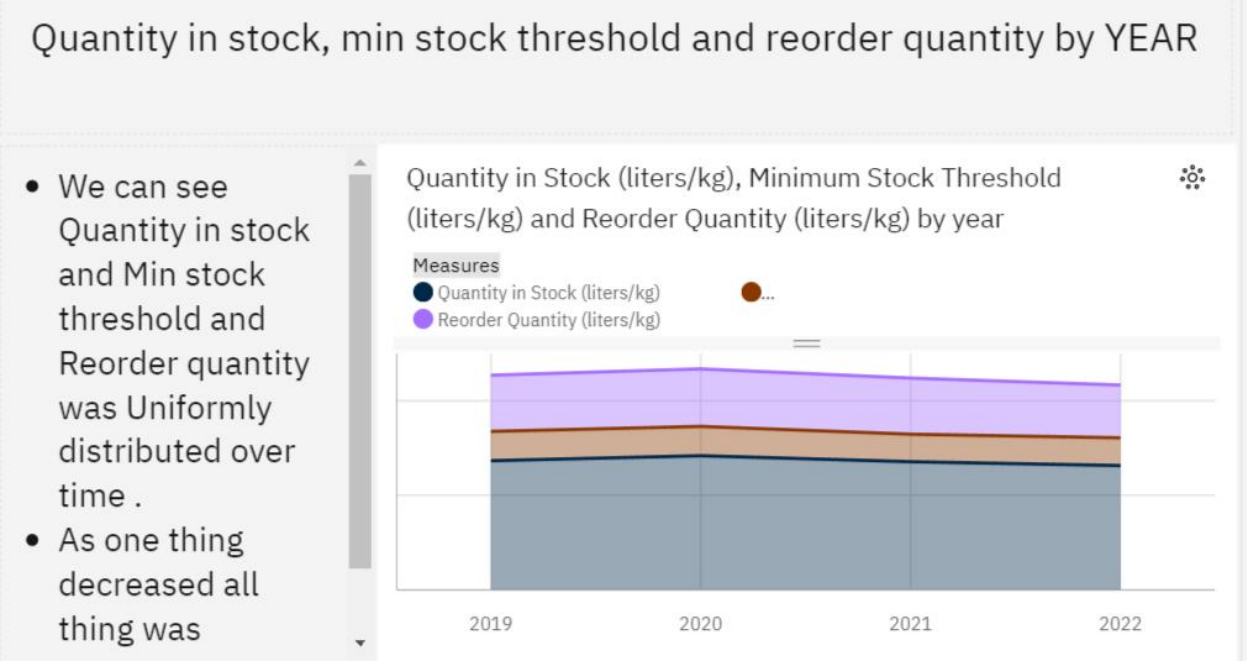
STORY SCENE 3:

Product sold by Quantity Sold (liters/kg) in year, colored by Product Name and sized by Price per Unit

- We can see curd sold quantity is 32,997 it was maximum of all time and it's price per unit is 55.92.
- In 2019 since ice cream has price per unit is 50.84 it was 2nd most sold item with quantity 29.489.
- Cheese sales were exponentially decreased when it's price was increased in 2019.



STORY SCENE 4:



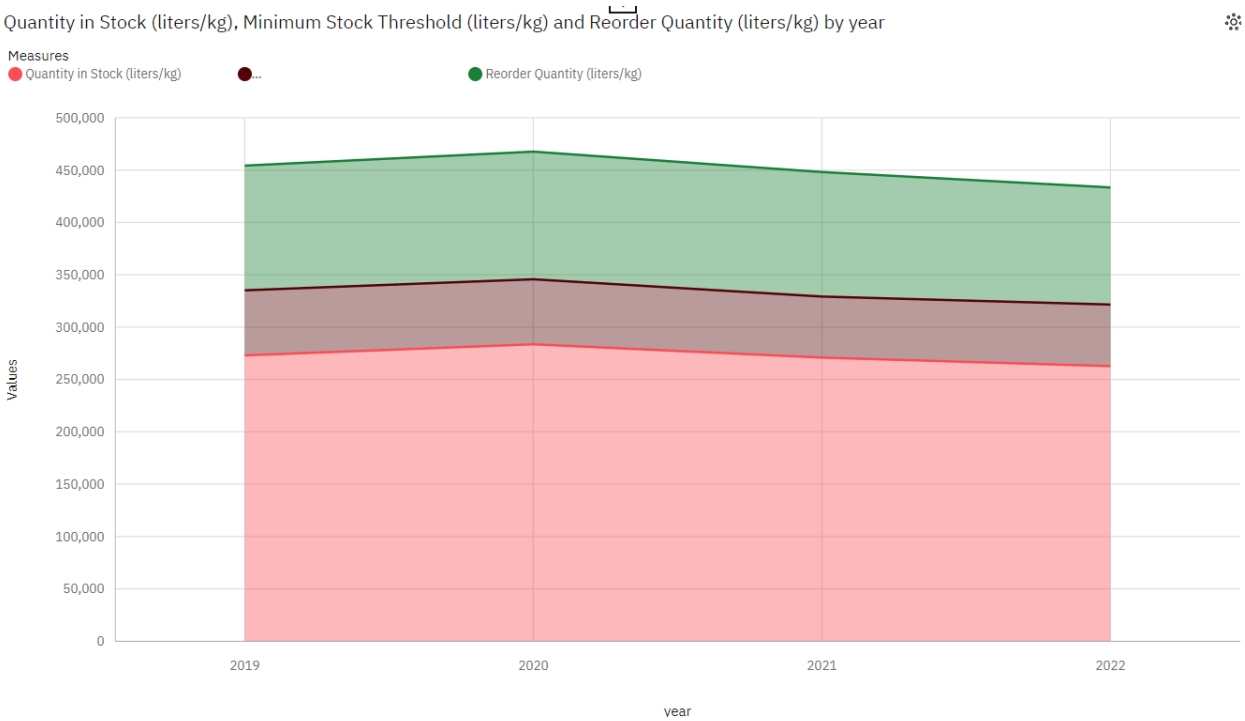
5.Report:

A report is a document that presents information in a specific format and layout, usually based on data from a database or other data source. A report in IBM Cognos can contain various elements, such as tables, charts, graphs, and images, as well as text and data elements, and it is designed to be used by business users to help them better understand their data and make informed decisions.

There are several different types of reports available in IBM Cognos, including list reports, crosstab reports, chart reports, and report studio reports, among others. The type of report that you choose will depend on the specific needs and requirements of your organization, as well as the data that you need to present.

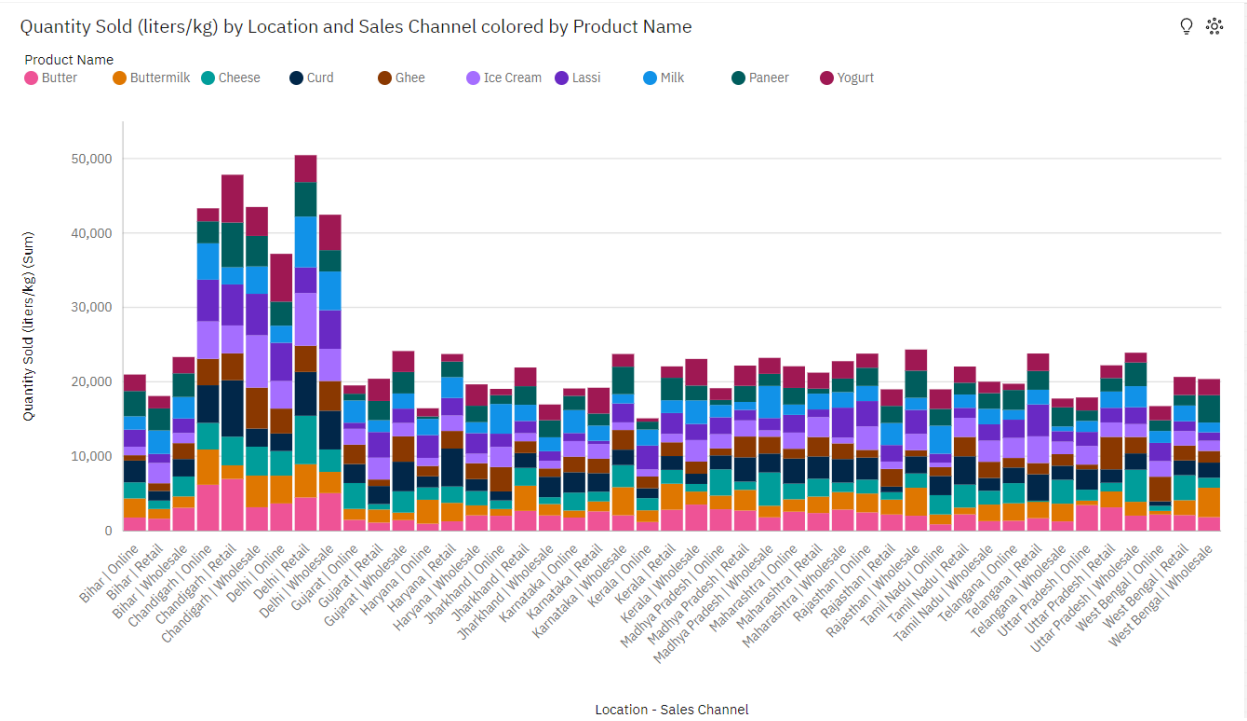
1. Quantity in stock, min stock threshold and reorder quantity by YEAR

- We can see Quantity in stock and Min stock threshold and Reorder quantity was Uniformly distributed over time .
- As one thing decreased all thing was decreased and increase too.



2. Quantity of Product sold in locations with 3 channels(online/retail/wholesale)

- Delhi having high demand of milk product products mostly milk in retail channels.
- Sales in kerala on online having the lowest sales mostly in yogurt.
- The highest sales of Butter was from Chandigarh from retail channels



6.ADVANTAGES:

- Informed Decision-Making: The project empowers stakeholders to make informed, data-driven decisions in the dairy industry, which can lead to improved efficiency and profitability.

- Comprehensive Data: The dataset encompasses a wide range of data, making it a valuable resource for various aspects of the dairy industry, from farm performance to sales and distribution.

- Localized Insights: Focusing on specific regions in India provides localized insights, which can be highly valuable for businesses operating in those areas.

- Optimized Operations: Businesses can optimize their operations, reducing waste, and improving inventory management, potentially increasing overall revenue.

- Market Research: The dataset supports market research and trend analysis, helping businesses stay competitive and adapt to changing market conditions.

- Customer Satisfaction: By understanding customer preferences, businesses can tailor their products and

marketing efforts to enhance customer satisfaction and loyalty.

7.DISADVANTAGES:

- Intentional Data Drift: The intentional data drift, while creative, can introduce inaccuracies or complexities that may require additional effort to address.

- Limited Geographic Scope: The dataset focuses on specific Indian regions, which may limit its applicability for businesses operating outside of those areas.

- Data Quality: Data quality issues, common in many datasets, may require thorough cleaning and validation, adding to the workload for analysts and researchers.

- Complexity: The extensive dataset can be complex to navigate, and users may need advanced analytical tools and expertise to extract meaningful insights.

- Data Privacy and Security: Ensuring the privacy and security of sensitive data within the dataset is essential, particularly when sharing it with external parties.

8.CONCLUSION :

- In conclusion, the Dairy Goods Sales Dataset represents a valuable resource with the potential to drive significant advancements in the dairy industry. Its extensive coverage of data related to farm performance, sales, and product quality offers numerous advantages. It empowers analysts, researchers, and businesses to make data-driven decisions, optimize operations, and enhance customer satisfaction.

- However, it's important to acknowledge the intentional data drift, which may introduce complexities and inaccuracies that require careful handling. The dataset's limited geographic scope may also restrict its applicability to businesses outside of the specified regions.

- Despite these challenges, the project holds immense promise for the dairy industry, facilitating informed decision-making, more efficient resource utilization, and potential revenue growth. To fully harness its potential, users should approach the dataset with diligence, considering data quality and privacy, and leverage advanced analytical tools and expertise to extract meaningful insights. With these considerations, the Dairy Goods Sales Dataset can play a pivotal role in driving positive change and innovation in the dairy sector.

9.FUTURE SCOPE:

- The future scope for the Dairy Goods Sales Dataset project is promising, with several potential avenues for growth and development:

- Expanded Geographic Coverage: Consider expanding the dataset's coverage to include more regions, states, or countries. This would make the dataset more comprehensive and applicable to a wider range of dairy businesses.

- Integration of Real-Time Data: Incorporating real-time data on factors like weather conditions, market trends, and consumer preferences can enhance the dataset's predictive capabilities and provide more dynamic insights.

- Machine Learning and AI: Leveraging machine learning and artificial intelligence can help in the development of more sophisticated predictive models for demand forecasting and pricing strategies, further improving operational efficiency.

- Mobile Applications: Developing mobile applications or online platforms that offer user-friendly access to the dataset's insights can make it more accessible to a broader audience.

- Collaborative Research: Encourage collaboration with universities, research institutions, and industry experts to conduct in-depth studies and analyses, potentially leading to innovative solutions and best practices in the dairy sector.

- Data Monetization: Explore opportunities to monetize the dataset through various subscription models, consulting services, or by providing tailored reports and insights to industry stakeholders.

- Quality Control Measures: Invest in robust data quality control measures to mitigate the challenges posed by intentional data drift, ensuring that the dataset remains reliable and accurate.

- Data Privacy and Compliance: Stay updated with evolving data privacy and compliance regulations, ensuring that sensitive data within the dataset is handled securely and transparently.

- Sustainability Analysis: Incorporate sustainability metrics and analysis to address growing concerns in the dairy industry about environmental impact and ethical practices.

- Feedback Mechanisms: Implement feedback mechanisms to gather insights and suggestions from users, allowing continuous improvement of the dataset and the platform's usability.

Project Video Demo Link:

https://drive.google.com/file/d/1jfLLysTYWGF1kuEJaXQFGwITEZauNQeh/view?usp=sharing