CAPSTONE PROJECT MID – TERM SUBMISSION

INVENTOINSIGHT : KIRANA STORE ANALYSIS & OPTIMIZATION

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1. <u>Executive Summary</u> :

Buying groceries is an important part of our everyday routines, helping us stay healthy by providing the food we need. For a store like Shiva Sai Kirana, it's crucial to plan well, build good relationships with customers, and have a smart business strategy to do well in the grocery industry. Shiva Sai Kirana, a medium-sized store, is facing problems with making enough money and keeping track of the things they have in stock, which affects how much money they make and how much they sell.

The rise of online shopping has changed the way we buy things, but it's also made things harder for local stores like Shiva Sai Kirana, making their profits go down. This project is all about helping Shiva Sai Kirana deal with the specific problems they have in their business. We're mainly looking at understanding how to manage the money that comes in and goes out and keeping track of what they have to sell. By looking closely at the data, we want to suggest practical solutions to solve these problems and make the store do better overall.

Goal for Mid Term :

- To find which Stock Keeping Unit (SKU) contributes more to the net profit and is suitable for continuing in longer sales.
- To find which SKU has longer profit margin.
- To examine pareto principle for SKU's.
- To examine and determine the revenue and purchase price trend in the market.

2. <u>Proof of Originality of data</u> :

Details :

Shop Name : Shiva Sai Kirana

Owner : Bikkumalla Nagaraju

Adress : 6-1-218, Ramgiri, Nalgonda, Telangana, India – 508001

About :

Shiva Sai Kirana is a very good shop that sells many things people need every day. They sell stuff to people and businesses. They have a lot of important things like beans, sugar, salt, oils, ghee, and dry fruits. The shop started in early 2018 and is known for selling really good things.

Many local businesses, like food places, like to buy things from Shiva Sai Kirana because they are good quality and not too expensive. Besides helping regular people, the shop is also good at selling a lot of things at once to businesses. They can even help with big events and parties, making sure everything goes well and people are happy with what they buy.

Images :

To show what I'm saying, I have pictures that point out the store. Also, there are pictures of example bills and simple receipts that the store uses to write down every sale carefully. These pictures help to clearly and honestly show how Shiva Sai Kirana store works. I must tell you that this shop doesn't issue the bills, rather they write it on some paper and give it to the customer only if one insists.

(i).Main Shop Area Picture for reference name and location
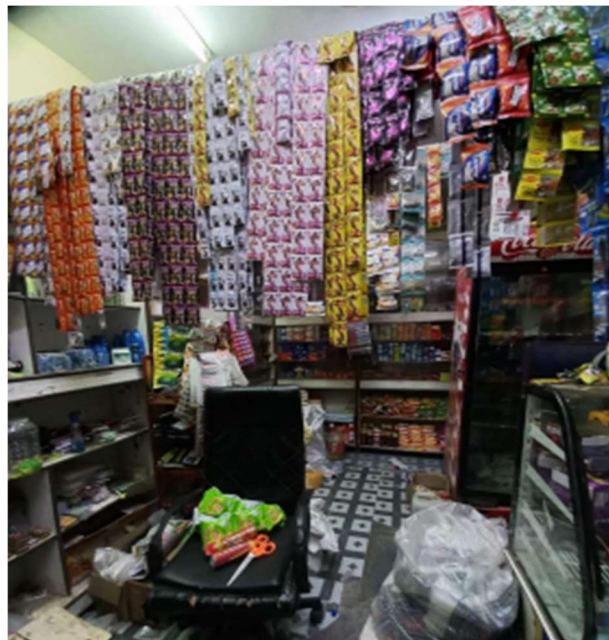
(ii).Shop Storage Area
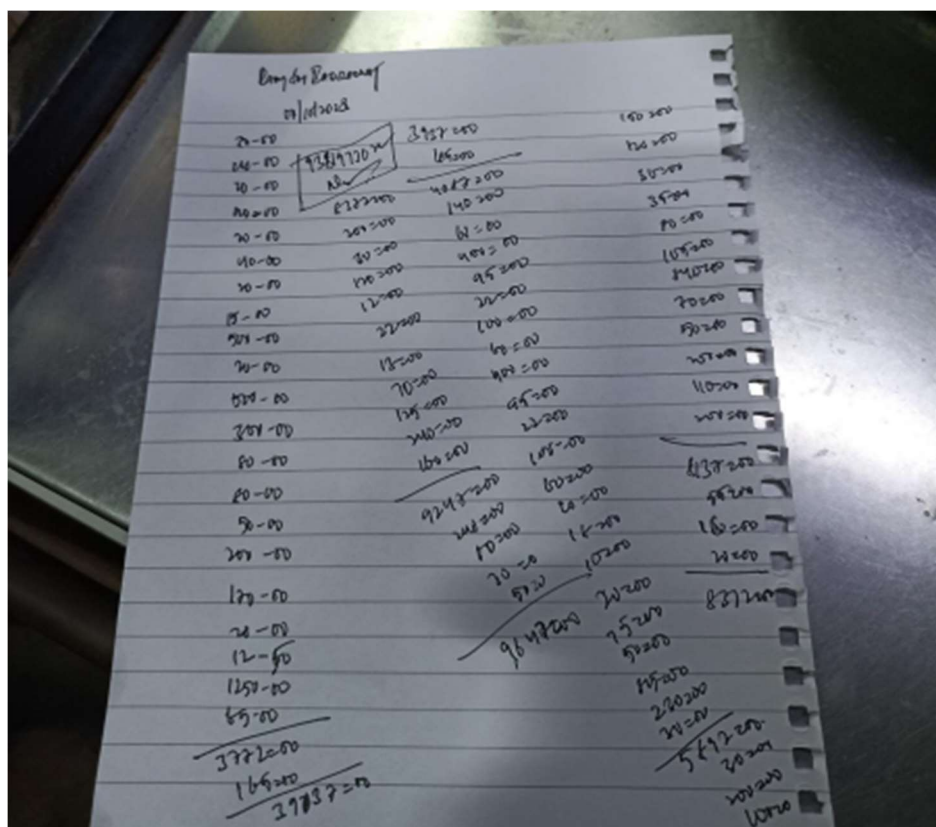
*(iii). One of the many Pictures of sales record collected informally*

3. Meta Data and Statistics :

I worked hard to collect information for a whole month, from December 21st, 2023, to January 21st, 2024. I made sure to go to the store every day and planned my visits every other day. My goal was to get all the necessary information for the entire time I mentioned.

DATE	RICE	ATTA	TOOR DAL	MOONG DAL	SALES URAD DAL	SUGAR	COOKING OIL	GHEE	MILK & DAIRY	DRY FRUITS	RICE	ATTA	TOOR DAL	MOONG DAL	SELLING PRICE URAD DAL
21-12-2023	140	110	24	16	40	70	36	20	56	10	₹45	₹41	₹102	₹110	₹112
22-12-2023	90	80	28	14	44	48	30	10	50	6	₹45	₹41	₹102	₹110	₹112
23-12-2023	70	50	20	20	50	40	40	8	58	4	₹45	₹41	₹102	₹110	₹112
24-12-2023	60	40	22	16	44	42	40	10	64	6	₹44	₹41	₹102	₹110	₹112
25-12-2023	66	36	18	14	40	48	38	11	75	10	₹44	₹41	₹102	₹110	₹112
26-12-2023	20	24	8	8	4	10	8	4	60	0	₹44	₹41	₹102	₹110	₹112
27-12-2023	40	20	8	6	8	8	6	2	60	2	₹46	₹41	₹104	₹110	₹112
28-12-2023	40	24	8	6	6	10	8	4	59	4	₹44	₹42	₹104	₹110	₹112
29-12-2023	60	30	6	4	4	6	6	4	80	4	₹44	₹42	₹104	₹110	₹112
30-12-2023	56	32	8	6	4	8	8	0	55	0	₹44	₹42	₹104	₹110	₹112
31-12-2023	48	24	6	8	6	8	6	2	56	0	₹42	₹42	₹104	₹110	₹108
01-01-2024	48	28	8	8	8	6	6	2	58	0	₹42	₹42	₹104	₹110	₹108
02-01-2024	50	28	6	8	6	10	4	0	60	0	₹42	₹42	₹104	₹110	₹108
03-01-2024	106	34	12	8	10	12	8	2	65	0	₹44	₹41	₹108	₹110	₹111
04-01-2024	42	24	6	10	8	4	4	0	57	0	₹44	₹41	₹108	₹110	₹111
05-01-2024	40	26	10	10	10	4	6	0	54	1	₹44	₹41	₹108	₹110	₹111
06-01-2024	52	20	4	2	6	4	2	0	53	0	₹45	₹41	₹108	₹110	₹111
07-01-2024	40	30	4	2	2	2	0	2	55	0	₹45	₹41	₹108	₹110	₹111
08-01-2024	36	20	6	2	6	4	4	2	54	0	₹43	₹41	₹108	₹110	₹111
09-01-2024	38	18	4	6	8	6	4	2	55	2	₹45	₹41	₹104	₹113	₹122
10-01-2024	48	30	8	2	2	8	6	4	50	2	₹45	₹41	₹104	₹113	₹122
11-01-2024	260	90	36	26	28	94	68	18	90	6	₹45	₹41	₹104	₹113	₹122
12-01-2024	290	116	30	20	36	100	60	20	90	10	₹45	₹41	₹104	₹113	₹122
13-01-2024	230	96	30	18	24	54	36	22	95	11	₹45	₹41	₹104	₹113	₹122
14-01-2024	160	60	22	10	16	40	22	20	100	12	₹45	₹41	₹104	₹113	₹122
15-01-2024	70	16	12	8	8	12	6	2	57	0	₹45	₹41	₹104	₹113	₹122
16-01-2024	210	40	18	10	16	12	20	4	55	0	₹45	₹41	₹104	₹113	₹122
17-01-2024	260	60	30	24	24	18	28	8	65	4	₹45	₹41	₹104	₹113	₹122

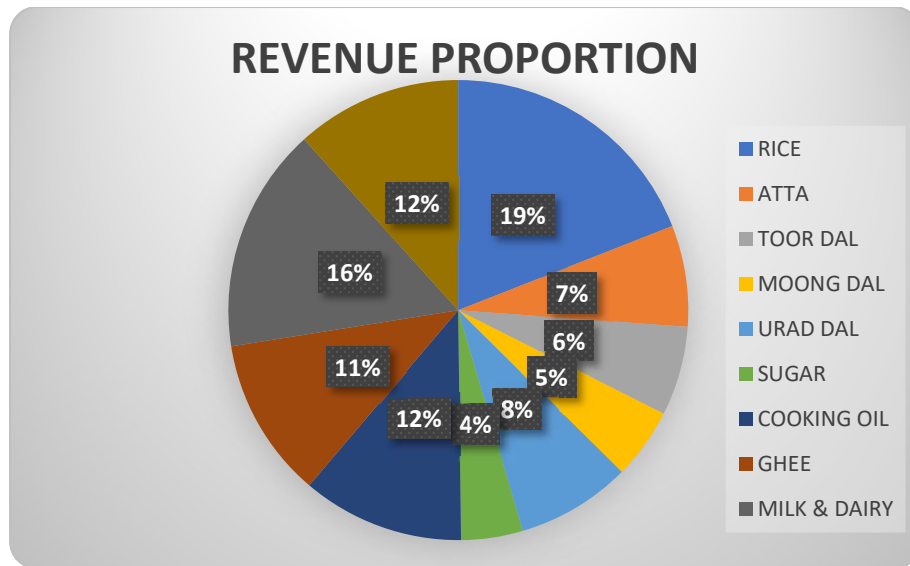*(iv).Snapshot Of data*

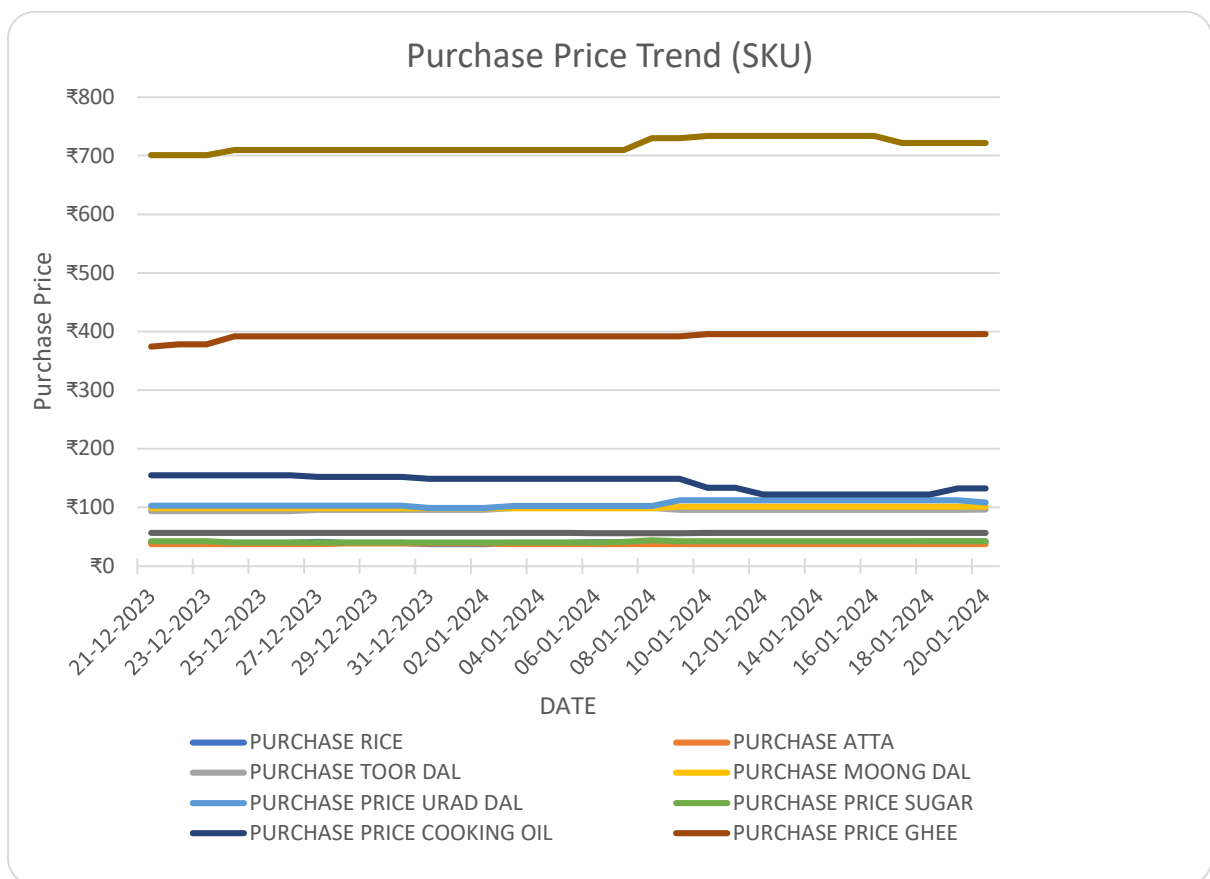Here is the descriptive statistics analysis conducted based on the collected data:
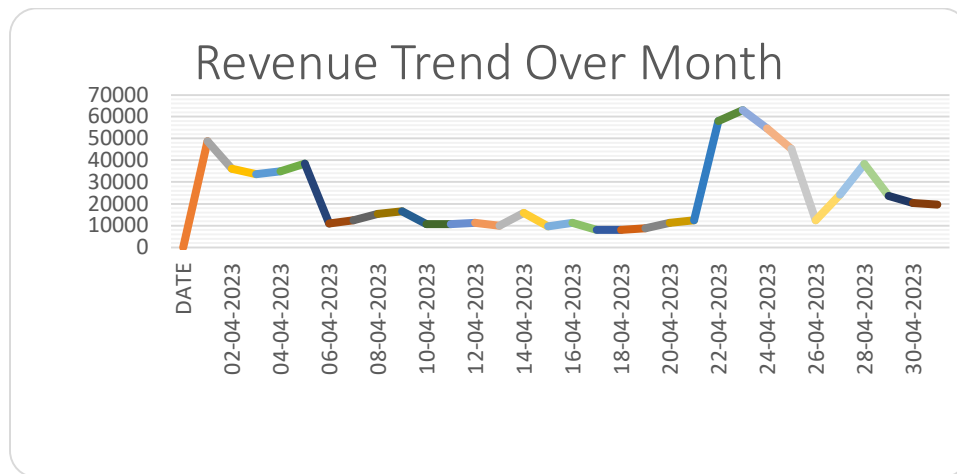
(v). Total revenue trend over month
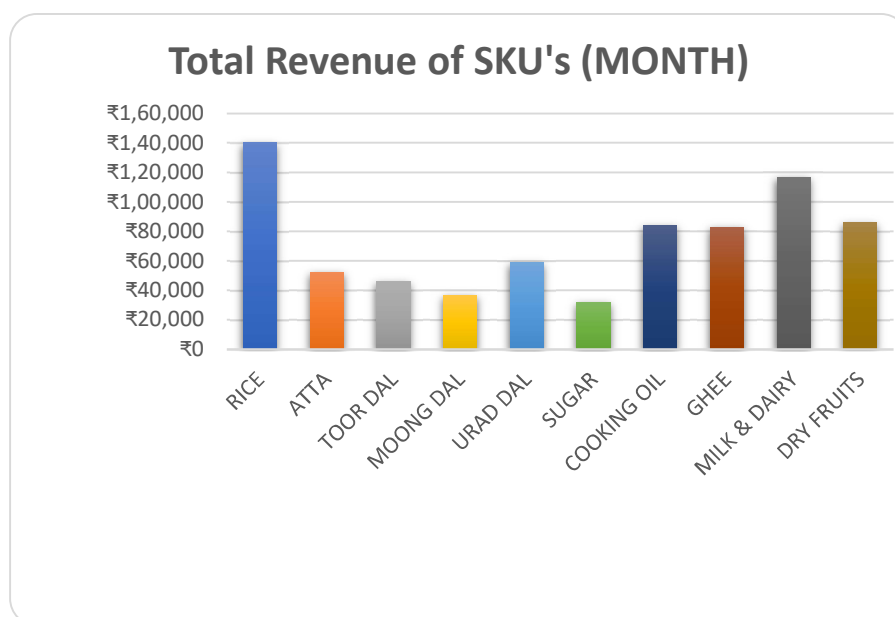
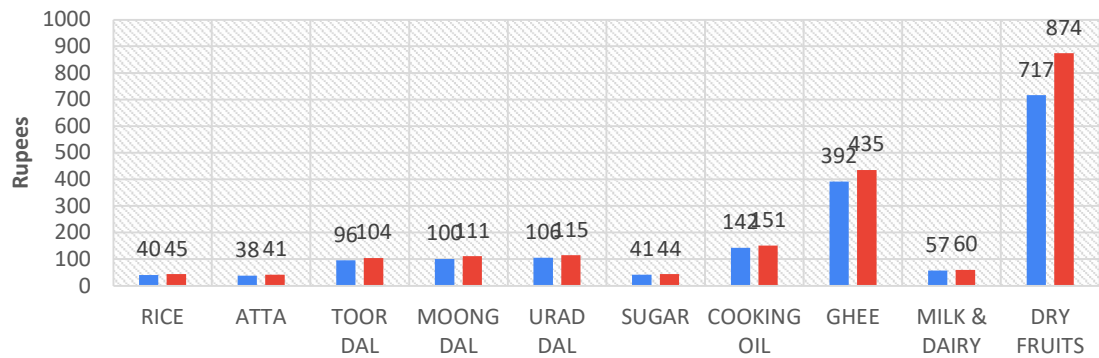*(vi) Total Revenue of SKU's (Month)*

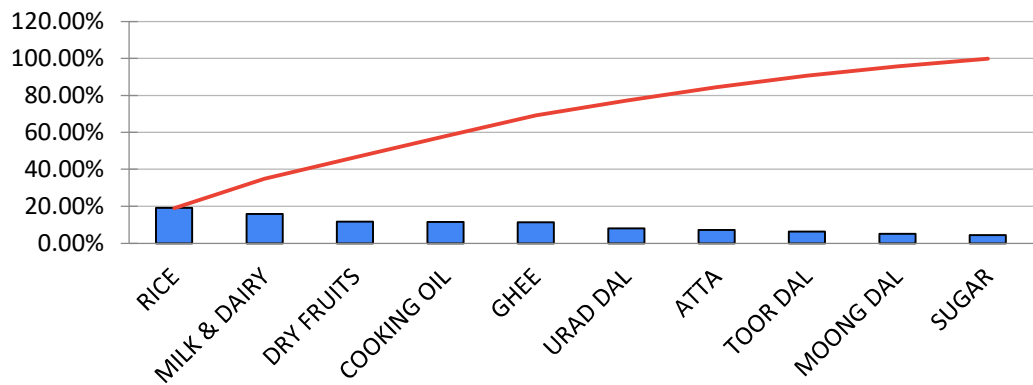*(vii) SKU's proportion to the total revenue*

(viii) Purchase price of the SKU over a period of month (for shop owner)
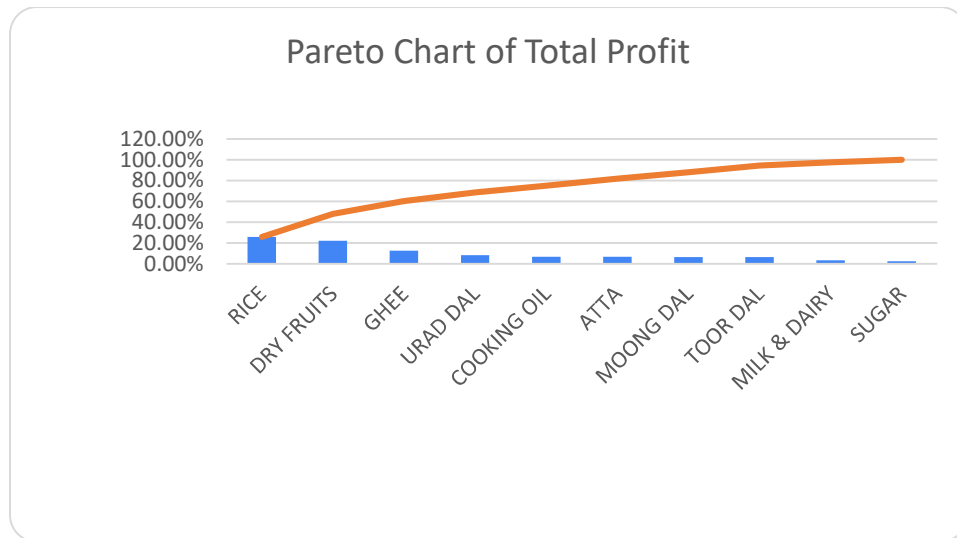
Avg Purchase Price VS Avg Selling Price

(ix). Average purchase price vs Average selling price

Pareto Chart of Total REVENUE

(x). Pareto chart of total revenue

(xi). Pareto chart of total profit

Detailed explanation of Analysis process/method :

I gathered information for 30 days using Google Sheets. Then, I made sure the data was neat and well-organized by checking for mistakes or missing parts. After that, I looked at the data in different ways to understand it better.

I used simple pictures like columns, bars, lines, and circles to show the information visually. These pictures helped me see how well the shop is doing by looking at things like money, profit, and how much stuff is in stock.

One special picture I used combined lines and bars to show which things in the shop make the most money. The bigger the bar, the more money one thing makes. The line shows how much money is made overall.I also used a circle picture to show how much money each thing in the shop makes compared to the total money. The bigger the slice of the circle, the more money that thing makes.

I used another line picture to see how money and prices change over time. This helped me understand trends and patterns in the business. Overall, these pictures helped me make better decisions for the shop to do well and make more money.

Results and Findings :

The analysis, based on the examination of graphs and charts, has revealed several key findings:

1. Rice makes the most money for Shiva Sai Kirana. The price for buying rice stays the same every month, showing it's really important for the store, but it's hard to spend less money on it.

2. Even though rice makes the most money, butter (ghee) gives the most profit compared to other products.

3. When we use the Pareto Principle, we see that rice, dry fruit, butter (ghee), urad dal, oil, and atta together make about 80% of all the money.

4. We couldn't find a clear pattern in how much money is made each month because we don't have a lot of data. But, we noticed that the prices for the products don't change much during the month.

To sum up, our study shows that rice is really important for making money, butter (ghee) gives a lot of profit, and some specific products make most of the money. We also need more information to understand how the money changes each month and if the prices for products stay the same."