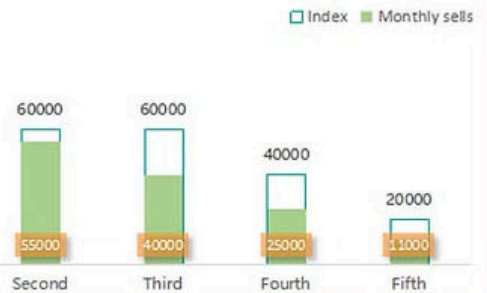


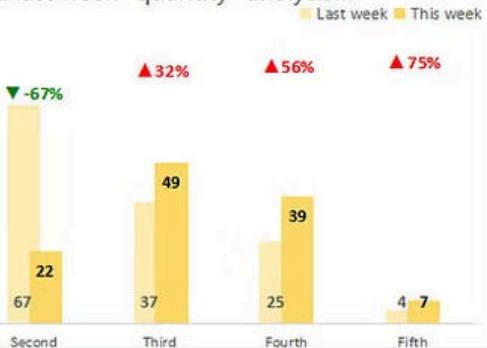
## Store sales data analysis

Index	Monthly sells	Finishing rate	Last week		
			Quantity	Sum	A
110000	80000	72.7%	72	13890	
60000	55000	91.7%	67	13508	
60000	40000	66.7%	37	6669	
40000	25000	62.5%	25	4939	
20000	11000	55.0%	4	732	
290000	211000	72.8%	205	39738	

Monthly sales analysis chart of indicate



Last week "quantity" analysis...



This week and last week "sale" o chart



# Introduction to Retail Sales Dataset

In this project, you will work with a dataset containing information about retail sales. The goal is to perform exploratory data analysis to gain insights into sales trends, customer behavior, product performance, and marketing strategies.



by Sanjay Nayak

# Data Exploration and Understanding

## Data Cleaning

Before analysis, it's essential to clean and preprocess the dataset to handle missing values and outliers.

## Data Visualization

Visualizing the sales data will help in identifying patterns and understanding the overall distribution of sales.

## Descriptive Statistics

Understanding the basic features of the data, such as mean, median, and standard deviation.

## Dimensionality Reduction

Reducing the number of variables for further analysis using techniques like PCA.

# Analysis of Sales Trends and Patterns

## 1 Seasonal Analysis

Identifying patterns and trends that repeat over a specific period, e.g., yearly, quarterly, or monthly.

## 2 Time Series Forecasting

Using historical sales data to predict future sales patterns and trends.

## 3 Correlation Analysis

Understanding the relationships between sales of different products and their impact on each other.

# Customer Segmentation and Behavior

1

## Demographic Segmentation

Dividing customers into groups based on characteristics such as age, gender, income, and occupation.

2

## Behavioral Segmentation

Segmenting customers based on their purchasing behavior, such as loyalty, usage rate, and benefits sought.



\$3.5M

Revenue this year



### By product

Kos	\$0.56M
Ildsjel	\$0.76M
Freyr	\$1.41M
Lege	\$0.72M

16.8k

Units sold this year

### By product

Kos	3,117
Ildsjel	2,835
Freyr	7,077
Lege	3,820

# Product Performance and Inventory Management

## Monthly revenue

Total

\$500K

\$400K

\$300K

\$200K

\$100K

\$0

Jan

Mar

May

Jul

Sep

Nov

## Sales Analysis

Assessing the performance of individual products in terms of sales volume and revenue generated.

## Inventory Turnover

Evaluating how quickly products are sold and restocked to optimize inventory levels.

## Stock-Out Analysis

Identifying products that frequently go out of stock to ensure adequate inventory levels.

## By product

\$60K

\$40K

\$20K

\$0

Jan

Mar

May

Jul

Sep

Nov

Ildsjel Freyr Lege

# Marketing and Promotional Strategies

Social Media Campaigns

Influencer Collaborations

Email Marketing

Retail Promotions

Customer Loyalty Programs

Affiliate Marketing

# Future Predictions and Forecasting

## Machine Learning Models

Developing predictive models using historical sales data to forecast future trends.

1

2

## Economic Indicators

Consideration of external factors such as GDP, employment rates, and consumer confidence for forecasting.

## Scenario Analysis

Assessing potential future scenarios and their impacts on sales and overall business performance.

3

# Conclusion and Key Takeaways



## Valuable Insights

Extracting actionable insights from the data to drive informed decision-making and business strategies.



## Strategic Decisions

Using findings to optimize inventory, enhance marketing tactics, and tailor product offerings to customer preferences.



## Business Growth

Implementing data-driven strategies to fuel growth and achieve a competitive edge in the retail market.