

DATA ANALYTICS WITH COGNOS

PRODUCT SALES ANALYSIS

PHASE 3

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AIM :

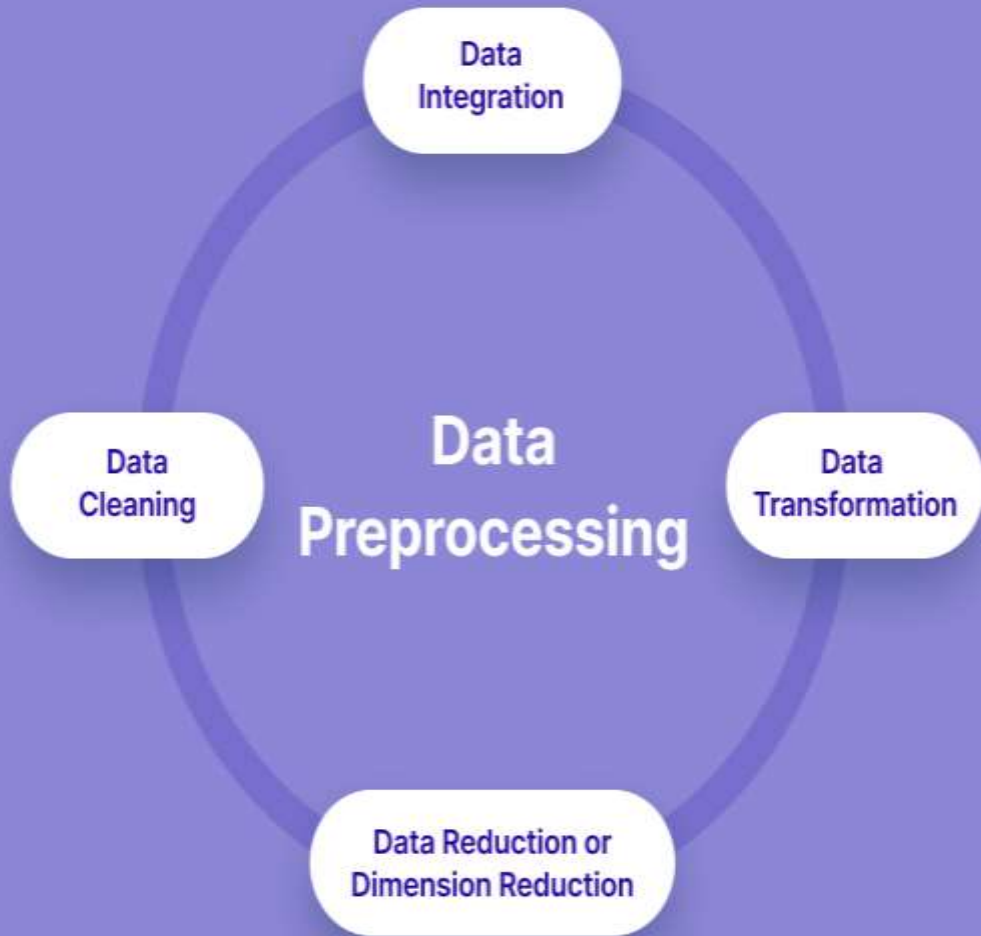
To Load and preprocessing the dataset. Start building the product sales analysis using IBM Cognos for Visualization.

Define the analysis objectives and collect sales data from source shared. Process and clean the collected data to ensure its accuracy and reliability.

DatasetLink:

<https://www.kaggle.com/datasets/ksabishak/product-sales-data>





DATA PREPROCESSING:

Data preprocessing is the process of transforming raw data into an understandable format. It is also an important step in data mining as we cannot work with raw data. The quality of the data should be checked before applying machine learning or data mining algorithms.

Product sales analysis objectives

- Conversion rates report
- Sales effectiveness analytics
- Improve sales strategies
- Average Purchase Value
- Increase revenue
- Encourage repeat sales
- Provide customer analysis
- Evaluate product demand



SOURCE CODE

```
import pandas as pd
#Load the dataset
url = https://www.kaggle.com/datasets/ksabishek/product-sales-data
data = pd.read_csv(url)
# Display the first 5 rows of the dataset
print(data.head())
#Print the column names
print(data.columns)
#Check the data types of each column print(data.dtypes)
# Drop any rows with missing values
data = data.dropna()
# Remove any outliers in the 'quantity' column
data = data[data['quantity'] <= 500]
```

```
import matplotlib.pyplot as plt
import seaborn as sns
# Plot a bar chart of product sales
sns.countplot(data=data, x='product')
plt.title('Product Sales')
plt.show()
# Plot a heatmap of correlations between different variables
correlation_matrix = data.corr()
sns.heatmap(correlation_matrix, annot=True)
plt.title('Correlation Heatmap')
plt.show()
```

OUTPUT

Yearly Product Sales Comparison with Three Column Bar Graph

This slide is 100% editable. Adapt it to your needs and capture your audience's attention.

Company Name: ABC Company

Unit in USD'000





Thank You