**Portfolio (Mini –Project)**

**1. Pizza Sales**

**Tool used= My SQL**

* Project Description –After successfully importing CSV data into our MySQL database using the Table Data Import Wizard.
* This project aims to enhance pizza sales performance and elevate customer satisfaction by implementing data-driven strategies and insights derived from comprehensive analysis of sales data and customer preferences within a pizza restaurant setting.
* Develop SQL queries to generate reports on key performance indicators (KPIs) such as total revenue, average order value, average pizza per order, daily trend, hourly trend, % of sales by pizza category, %of pizza size ordered, orders with most number of pizza ordered, overall breakdown by pizza size
* Utilize aggregate functions (e.g., SUM, COUNT) to calculate metrics for analysis and decision-making along with order by, group by functions
* By executing these queries, we can gain a deeper understanding of sales patterns, customer preferences, and performance metrics crucial for informed decision-making and strategic planning within the pizza restaurant business.

**2. Music Store Analysis**

**Tool used= My SQL**

* Project Description – After successfully importing CSV data into our MySQL database using the Table Data Import Wizard.
* This project aims to empower music store stakeholders with actionable insights for informed decision-making and strategic business planning within the music sales industry.
* Develop SQL queries to generate reports on key performance indicators (KPIs) such as countries with most invoices, person who has spent most money, details regarding genre of music (listeners of rock, pop,) top 10 artist genre wise.
* Implemented JOIN operations are essential for merging data from these tables based on common keys (e.g., foreign keys) to facilitate complex queries and derive meaningful conclusions.

**3.. Sales report for Chocolate company**

**Tool used= Power Bi**

* Project Description – In this project, we connected to a MySQL database containing chocolates data, imported the data, conducted exploratory data analysis (EDA) to identify missing or incomplete data, and then proceeded to create meaningful measures and calculated columns for deeper analysis.
* Finally, a user-friendly dashboard was designed to provide actionable insights and enhance user understanding of key metrics and trends within the chocolates data such as sales trend, sales by geography, salesperson with highest order related metrics.

**4.Sample Superstore Profit report**

**Tool used= Power Bi**

* Project Description – In this project, a comprehensive dashboard was created using Power BI to analyse and visualize the profit performance of a sample superstore dataset. The dashboard provides actionable insights into key metrics, trends, and patterns that drive profitability within the retail business.
* This Power BI dashboard serves as a powerful tool for analysing and optimizing the profit performance of the sample superstore, providing valuable insights for strategic decision-making and operational improvements.

**5. Tool used= Python**

In this project, we imported essential Python libraries for data analysis and visualization, including **numpy**, **pandas**, **matplotlib**, and **seaborn**.

We then conducted Exploratory Data Analysis (EDA) to gain insights into the dataset and implemented data visualizations using **seaborn** for effective representation of key metrics and trends.

**Datasets used**

**1.Diwali Sales Analysis**

**2.Spotify Song Analysis**

**3.Cars and flower(iris) data analysis**

**4. Hotel Data Analysis (Booking data)**

**5.Homicide Data Analysis**

Steps Taken:

**1. Importing Necessary Libraries:**

* numpy: For numerical computations and array operations.
* pandas: For data manipulation and analysis using Data Frames.
* matplotlib: For basic plotting and visualization.
* seaborn: For advanced statistical plotting and enhanced visualizations.

**2. Loading and Exploring the Dataset:**

1. Read the dataset into a Data Frame using pandas (pd. read\_csv () or other appropriate methods).
2. Explore the structure of the dataset (e.g., columns, data types, summary statistics) using pandas’ functions (df. head (), df.info (), df. describe ()).

**3. Exploratory Data Analysis (EDA):**

1. Identify and handle missing values (df. is null (), df. dropna (), df. fillna ()).
2. Analyse distributions of numerical variables using histograms and density plots (sns. distplot ()).

**4. Data Visualization with seaborn:**

1. Implement various seaborn plots to visualize categorical and numerical data:
2. Count Plot: Visualize frequency of categorical variables (sns. countplot ()).
3. Bar Plot: Compare numerical values across different categories (sns. barplot ()).
4. Distribution Plot: Display distribution of a numerical variable (sns. distplot ()).

**5.Use EDA findings to identify trends, outliers, and patterns within the dataset.**

**6.Visualizations provide actionable insights for decision-making and strategy development.**

**7. Future analysis can focus on predictive modelling or advanced analytics based on EDA insights.**