**# Preethi Data Work**

This repository contains my work on SQL, Power BI and Python

**Contents**

[SQL](http://localhost:8888/notebooks/OneDrive/Documents/Learning/MQ-Data-Science-OptusU-2022-portfolio-optusUraghupatlolla/portfolio-optusUraghupatlolla-main/Portfolio%201.ipynb) Exercises

This folder captures my work on SQL querying.

**Queries include examples on the following**

* SELECT, ALTER, UPDATE, DELETE
* ORDER BY, AGGREGATION USING GROUP BY (including HAVING, ROLLUP etc)
* JOIN statements (INNER, LEFT OUTER, RIGHT OUTER)
* LOGICAL OPERATORS
* CASE STATEMENT
* COMMON TABLE EXPRESSIONS
* WINDOW FUNCTIONS
* STRING FUNCTIONS

**Other SQL knowledge not captured in this folder**

* VIEWS
* TRANSACTIONS
* STORED PROCEDURES

Power BI Reports

This folder includes reports I created using Power BI

**Dashboards demonstrate my knowledge on the following**

* Connecting to multiple data sources
* Cleaning and Transforming data
* Using Query Editor
* Data modelling
* Manage Relationships
* Creating Visualisations
* Calculated fields
* Introductory DAX
* Conditional Formatting

**Reports Created**

* **Melbourne Property Analysis:** Analysis on Melbourne housing information from 2016-2018 showing trends of pricing and preferred properties by showing breakdown by key data points such as distance, bedrooms, building area, age of the property and council/suburb.
* **O-List Sales Analysis:** Analysis providing key insights on O-List store sales, products and customer for years 2017 and 2018. The report includes YOY trends, forecasting of sales, insights showing impact of delivery performance on customer satisfaction and clustering based on orders and region.
* **Pizza Sales Analysis:** Brief report showing high level summary of sales, including daily and monthly trends and popular choices.
* **Superstore Analysis:** Analysis on Superstore data from 2010 to 2013 showing YOY trends of profit, sales and customer, breakdown by region, top cities and popular products.

Python Projects

This folder includes projects, where I performed analysis using python.

Please see below for a summary of my python knowledge

* Python lists
* Numpy Arrays
* Pandas data frames
* Dictionaries
* Datatype manipulation
* Functions
* Plotting and visualising using Matplotlib and seaborn
* Data ingestion and ETL from multiple datasources (csv, Excel, Microsoft SQL and Postgres)

**Projects Created**

**Melbourne housing Project:** Analysis on Melbourne housing data from 2016-2018. Project involved.

* Basic data cleaning, filtering, and preparation
* Removing unrealistic data with justification
* Removing outliers for accurate analysis
* Provided insights using visualisations and markdowns on the following
  + Total number of properties by property type
  + Popular choice by number of bedrooms
  + Average Price by Property Type, Bedrooms, Distance from CBD and Building Area

**Adventure Works Project:** Analysis on Adventure works data to answer specific questions requested as part of an assessment. Project includes

* Using pyodbc to connect to Adventure Works database
* Data Ingestion into pandas dataframe by executing SQL queries in python
* Analysis on the below questions using visualisations and markdowns
  + Regional Sales in the best performing country
  + Relationship between annual leave and bonus
  + Relationship between Country and Revenue
  + Relationship between Sick Leave and Job Title
  + Relationship between store trading duration and revenue
  + Relationship between size of the stores, number of employees and revenue

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