**Advance PowerBI**

**Pre-requisite:**

* Basic Python
* Familiar with python data science library

**Task or Curriculum**

To complete the assignments please use datasheets provided by the mentor.Also use your own visualize reports created during PowerBI assignment.

All python related task should be done in jupyter notebook or in google colab and this files must be shared with mentor through github or bitbucket

Module 1: Data Preparation and Transformation with Python

* Loading and connecting data sources in Power BI
* Using Python scripts for data preparation and cleaning
* Transforming data using Python libraries (e.g., Pandas, NumPy)
* Applying data wrangling techniques with Python in Power Query Editor

Module 2: Visualizations and Analytics with Python

* Creating interactive visualizations in Power BI
* Integrating Python visuals into Power BI reports and dashboards
* Using Python libraries (e.g., Matplotlib, Seaborn) for advanced visualizations
* Performing statistical analysis and machine learning with Python in Power BI

Module 3: Advanced Analytics and Predictive Modeling

* Applying machine learning algorithms in Power BI with Python
* Training and evaluating predictive models using Python libraries (e.g., scikit-learn)
* Deploying and integrating predictive models in Power BI
* Using Python for forecasting and time series analysis in Power BI

Module 4: Data Refresh and Automation

* Configuring data refresh options in Power BI
* Automating data refresh and report generation using Python scripts
* Creating scheduled refresh tasks and notifications
* Troubleshooting data refresh issues and optimizing performance

Module 5: Custom Power BI Visuals with Python

* Overview of custom visual development in Power BI
* Creating custom visuals using Python libraries (e.g., Plotly, Bokeh)
* Customizing and enhancing visual functionality with Python code
* Packaging and sharing custom visuals in Power BI

Module 6: Advanced Power BI and Python Integration

* Extending Power BI capabilities with Python scripts and functions
* Integrating external Python packages and modules into Power BI
* Using Python for advanced data modeling and calculations in DAX
* Exploring Power BI REST APIs and embedding Python-powered visuals

Module 7: Power BI and Python Deployment

* Deploying Power BI reports and dashboards with embedded Python code
* Collaborating and sharing Power BI projects with Python integration
* Security considerations and best practices for Power BI and Python integration
* Performance optimization and scalability guidelines for Power BI and Python solutions