**Assignment 11 – Product Sales Analysis and Visualization**

**Technology:** Spark, Spark SQL, Databricks and Dashboard

**Dataset:** sales\_data\_sample.csv

Write Spark SQL queries to show the following analysis with Dashboard Visualization.

1. Identify Product with outlier sales in each quarter.
2. Monthly Sales Performance by Each Territory
3. Identify Consecutive Quarters of Sales Decline for Each Product
4. Median Sales for Each Product Line in Every Quarter
5. Percent Rank of Products Based on Gross Sales Amount in Each Quarter
6. Categorize Product Category Sales Performance as 'High', 'Medium', or 'Low' Based on Percentiles
7. Rank 5 Customers by Total Purchase in every Quarter of Each Year.
8. Identify and Present the Trends of Sales Growth by Month. (Bar Graph)