**Google Data Analytics Professional Certificate – Capstone Project**

**Case Study: Cyclistic Bike-Share Analysis**

## ****PHASE 5: SHARE – Visualize & Present Findings****

### ****Tools Used****

* Python (Matplotlib, Seaborn)

### ****Actions Taken****

1. **Developed stakeholder-friendly visualizations** to clearly highlight differences between **annual members** and **casual riders**.
2. Created the following plots in Python:
   * **Ride duration by user type** – Boxplot showing distribution of ride lengths for members vs. casual riders.
   * **Monthly ride trends** – Line chart showing ride volume changes over months.
   * **Day-of-week usage patterns** – Bar chart showing popular days for each user type.
3. **Saved visualizations** in the visuals/ folder for reporting and presentation purposes.

### ****Outputs****

* visuals/ride\_duration\_by\_user.png – Ride duration distribution comparison.
* visuals/monthly\_trend.png – Monthly usage trends.
* visuals/day\_of\_week\_usage.png – Day-of-week popularity chart.
* Dashboard screenshots saved for presentation purposes.

### ****Insights Shared with Stakeholders****

* Casual riders tend to have **longer ride durations** but ride less frequently.
* Annual members have **consistent usage patterns** throughout the week.
* Seasonal peaks in ridership occur during **summer months** for both groups, but casual riders show a stronger seasonal trend.