Coding Exercise – Part 1

Netflix Dashboard Enhancement – Deliverable Write-Up

1. Problem Statement

The original Netflix dashboard had several issues:

1. No clear layout or logical flow.
2. Overuse of static tables.
3. Lack of key performance indicators (KPIs).
4. No filters or interactivity.
5. Weak visual design – no use of titles, borders, colors, or hierarchy.
6. Map was included but lacked clarity and value.

2. Objective

Redesign the dashboard using Python to make it interactive, visually informative, and easier for stakeholders to explore.

3. Open-Source Stack Used

Tools & Environment:

- Python 3.8+
- Jupyter Notebook (Anaconda)
- Dataset: `BI&A_Case_Study_Netflix_data.csv`

4. Required Python Libraries

Install using:
`bash`
```
pip install pandas plotly ipywidgets
```

Libraries:

- `pandas` – for data processing and transformation
- `plotly.express` – for interactive chart creation
- `ipywidgets` – for dropdown filter and UI interactivity

- `IPython.display` – for dynamic output rendering

5. Key Enhancements Made

5.1 Interactive Filtering

- Added a dropdown to filter all charts by location.
- Enables region-specific analysis on user selection.

5.2 Logical Visual Flow

- Ordered visuals as Map → Bar Chart → Pie Chart.
- Follows the natural flow: where → what → how.

5.3 Visual Enhancements

- Applied color gradients for better readability.
- Used natural earth projection on the geo map.
- Added centered, bold dashboard title for context.

5.4 Clean Code Structure

- Modular logic and clear function naming.
- Easy to extend with additional filters or charts.

6. How AI Tools Helped

- Used ChatGPT
- Helped troubleshoot dropdown widget and callback behavior.
- Guided improvements to chart layout and presentation logic.
- Suggested Python best practices for interactivity and visual hierarchy.
- Assisted in drafting this deliverable documentation.

7. How This Version Adds Value Over the Original

1. Interactive filtering replaces static charts for deeper analysis.
2. Geo map introduces spatial context previously missing.
3. Logical order of visuals improves data storytelling.
4. Fully code-based, open-source approach—no external tools needed.

5. Design choices enhance readability and stakeholder usability.