📄 Task 4 Report – Location-Based Analysis

Cognifyz Technologies – Machine Learning Internship

🧑‍💻 Intern Details:

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- **Internship Duration**: June–July 2025
- **Task Title**: Task 4 – Location-Based Analysis

🎯 Objective

To explore and visualize geographical patterns in restaurant data, analyzing metrics like the number of restaurants, average ratings, and pricing across different cities.

🧰 Technologies Used

- Python (Google Colab)
- Libraries: Pandas, Matplotlib, Seaborn, Folium (optional)

🧪 Analysis Performed

1. **Top Cities by Number of Restaurants**
    - New Delhi leads with the highest count of restaurants
    - Followed by Gurgaon, Noida, and Faridabad
2. **Top Cities by Average Ratings**
    - Highest average ratings seen in cities like **Inner City**, **Quezon City**, and **Makati City**
3. **Correlation Heatmap**
    - Explored relationships between Aggregate rating, Votes, Price range, and Average cost for two
    - Aggregate rating shows positive correlation with Votes and Price range

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📊 Visualizations

- Bar Plot: Top 10 Cities by Number of Restaurants
- Bar Plot: Top 10 Cities by Average Rating
- Heatmap: Feature Correlations

✅ Conclusion

This task allowed me to:

- Perform real-world exploratory data analysis (EDA)
- Use data visualization to extract geographic insights
- Understand rating dynamics in different locations
- Practice data storytelling using Python visual tools

📎 Attachments:

- Notebook: Task4_Location_Analysis.ipynb
- Report PDF: Task4_Report_Yashwanth.pdf
- GitHub Repo: https://github.com/Yashwahthmc/Task-4.git

✍️ Signature:

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