Internship Report

Name: Jeevith Kumar B
Project Title: Google Play Store Analytics
Internship Duration: [07.08.2025] – [07.09.2025]
Company: Null Class Edtech Private Limited
Email: jeevithkumar1406@gmail.com
Tools Used: Python, Pandas, NumPy, Plotly, Jupyter Notebook, HTML, NLTK

1. Introduction

The internship project focuses on analyzing applications and user reviews from the Google Play Store. The objective was to extract insights about app categories, installs, ratings, revenue, and user sentiments. The final deliverable was a dynamic dashboard integrating conditional visualizations with time-based logic**.**

2. Background

With millions of apps on the Play Store, analyzing performance metrics and user behavior is essential. This project uses real-world datasets to explore installs, reviews, ratings, and revenue across multiple categories. The focus was also on applying strict filters and displaying charts only within certain IST time ranges.

3. Learning Objectives

- Perform data preprocessing and cleaning
- Explore data analysis with Pandas and NumPy
- Build time-restricted interactive charts with Plotly
- Translate categories into multiple languages for visualization
- Integrate advanced filters for installs, reviews, ratings, and app metadata
- Implement dynamic dashboards with Python and HTML

4. Activities

I worked on cleaning and transforming the Play Store data, applying category translations, and implementing filters for app size, installs, ratings, and reviews. I created multiple visualization tasks as per requirements and ensured each chart rendered only within its specified IST time window.

5. Tasks Completed

- **Task 1:** Grouped bar chart comparing average rating and review count for top 10 categories by installs, shown only between **3 PM – 5 PM IST**.
- **Task 2:** Interactive choropleth map for global installs by top 5 categories, excluding those starting with **A, C, G, or S**, accessible between **6 PM – 8 PM IST**.
- **Task 3:** Dual-axis chart comparing installs and revenue for Free vs Paid apps in top 3 categories, restricted to **1 PM – 2 PM IST**.
- **Task 4:** Time series line chart highlighting >20% MoM growth, translating Beauty (**सौंदर्य**), Business (**வணிகம்**), and Dating (**Verabredung**), viewable between **6 PM – 9 PM IST**.
- **Task 5:** Bubble chart analyzing app size vs rating, highlighting Game in pink, translations applied, restricted to **5 PM – 7 PM IST**.

6. Skills Developed

- Data manipulation with Pandas
- Interactive data visualization using Plotly
- Timezone-aware scripting in Python
- Natural language handling for category translation
- Dashboard integration with HTML and Jupyter Notebook

7. Competencies Gained

- Independent handling of analytical projects
- Application of strict business rules in data analysis
- Multi-language visualization labeling
- Best practices in coding, documentation, and dashboard design

8. Feedback

The project received positive feedback for its structured approach and creative implementation of time-gated dashboards. Mentors appreciated the multilingual visualizations and strict adherence to filtering conditions.

9. Evidence of Work

- Jupyter Notebook with Python code for data analysis
- Interactive Plotly charts with time restrictions
- HTML dashboard integrating all visualizations
- GitHub repository hosting project files

10. Challenges Faced

- Handling missing and inconsistent dataset values
- Implementing complex filters on multiple attributes simultaneously
- Designing charts that only render within specific IST time windows
- Applying accurate translations for category names in multiple languages

11. Solutions Applied

- Applied Pandas filtering and typecasting for data cleaning
- Used Python datetime with pytz for IST-based restrictions
- Modularized code into reusable functions for each chart
- Verified translations for Hindi, Tamil, and German categories

12. Outcomes and Impact

The final dashboard provided deep insights into Play Store app performance, installs, and user reviews. It showcased advanced filtering and visualization logic, helping stakeholders analyze app trends effectively. The project strengthened my confidence in delivering end-to-end analytical solutions.

13. Conclusion

This internship project gave me comprehensive exposure to data preprocessing, visualization, and dashboard creation. It enhanced my technical knowledge, problem-solving ability, and capacity to integrate multi-language and time-based logic into interactive data products.