

Google Play Store EDA Project - Product Report

Project Overview:

The Google Play Store EDA Project is a data-driven exploration and analysis of Android applications.

Purpose: Derive insights about app performance, ratings, installs, pricing, and user engagement.

Technologies Used:

Python (Pandas, NumPy), Jupyter Notebook, Matplotlib/Seaborn (for development), CSV Data, Datetime Simulation

Dataset Overview:

Simulated dataset of 5,000 apps.

Features include: App, Category, Rating, Reviews, Size, Installs, Type, Price, Content Rating, Genres, Last Updated, Android Version.

Free Apps: 92%, Paid Apps: 8%, Average Rating: 4.12, Install Range: 100 - 10M

Data Cleaning:

- Handled missing values and type inconsistencies
- Standardized price, rating, and install columns
- Created log features and removed outliers

Exploratory Analysis:

1. Ratings Distribution - Avg: 4.12, High-rated (>4.5): 10%
2. Installs - Avg: 3.6M, Median: 500K, Top categories: Tools, Games, Family, Education
3. Reviews - Avg: 58K, Strong correlation with installs (0.90)

4. Free vs Paid Apps - Free: 4.10 rating avg, Paid: 4.32 avg
5. Category-Level Insights - Health, Education, Music rated highest
6. Pricing - Median price: \$4.99, Most apps < \$10
7. Update Frequency - 61% apps updated in last 90 days
8. Content Ratings - 70% 'Everyone', 18% 'Teen'

Statistical Summary:

Average Rating: 4.12 | Median Installs: 500K | Mean Installs: 3.6M | Apps >4.5: 10%

Average Paid Price: \$4.99 | Avg Reviews: 58K | Top App: App_1543 | Most Installed: App_218

Key Insights:

- Free apps dominate in installs, paid apps lead in satisfaction.
- Frequent updates improve ratings.
- Health, Education, and Music are most loved categories.
- Larger or expensive apps are not necessarily better rated.

Recommendations:

For Developers: Target Education, Tools, Health. Keep apps lightweight and frequently updated.

For Marketers: Focus on Tools and Family categories. Enhance app store optimization (ASO).

For Analysts: Extend project with ML models and visualization dashboards.

Conclusion:

This EDA highlights that user engagement, app quality, and frequent updates drive success.

Free apps dominate downloads, but paid apps maintain stronger loyalty.