Google Play Store Data Analytics with Python

Introduction:

Information on app performance, user behavior, and market trends is available through the Google Play Store Analytics initiative. It helps business analysts, marketers, and app developers make data-driven choices, enhance user engagement, and optimize app strategy.

Background:

Data cleansing, transformation, exploratory data analysis (EDA), sentiment analysis, and the development of an interactive dashboard are all part of the project's investigation of Google Play Store data. Finding valuable insights in the data to help guide company decisions is the aim.

Learning Objectives:

- Make use of the Python libraries Scikit-learn, Pandas, NumPy, and Plotly.
- Use NLTK to conduct sentiment analysis.
- Use Plotly to create interactive visuals.
- Use HTML to incorporate visuals into web apps.

Activities and Tasks:

Data Loading and Cleaning:

- Cleaned Google Play Store data using Pandas.
- Handled missing values, duplicates, and data type inconsistencies to ensure data reliability.

Data Transformation:

- Created new features like log-transformed install counts and categorized ratings.
- Calculated revenue metrics for deeper insights into app performance.

Exploratory Data Analysis (EDA):

- Visualized trends in app categories, ratings, and reviews.
- Highlighted top-performing app categories.

Sentiment Analysis:

- Performed sentiment analysis on user reviews using NLTK.
- Determined sentiment polarity (positive, negative, neutral) and its impact on app metrics.

Interactive Visualization and Dashboard Creation:

- Built dynamic visualizations with Plotly.
- Integrated visualizations into web applications using HTML.
- Designed a user-friendly dashboard for key insights.

Skills and Competencies:

- Python Programming
- Data Analysis and Visualization
- Sentiment Analysis
- Dashboard Creation
- Web Application Integration

Challenges and Solutions:

- Data Quality Issues: By using cleaning procedures, missing and inconsistent data were addressed.
- Complex Visualizations: To improve visual representation, sophisticated Plotly capabilities were used.

Outcomes and Impact:

- Produced informative reports to aid marketers and app developers.
- A better comprehension of market trends for apps.
- Improved proficiency in sentiment analysis, data analysis, and visualization.

Conclusion:

The Google Play Store Analytics project offered a thorough education in interactive visualization, sentiment analysis, and data analysis. It improved technical proficiency while offering insightful information for app ecosystem decision-making.