**Project : Bot Performance Analysis and Improvement**

Idea Abstract: This project aims to analyze historical performance data of a bot using PySpark Core, SQL, and Hive. The analysis will help identify trends, optimize bot responses, and enhance user experience.

**Objectives:**

* Collect and process historical bot interaction data.
* Analyze bot performance and user behavior using SQL.
* Identify trends and changes over time.
* Visualize key metrics and trends.
* Implement predictive analytics for future bot performance and user interactions.

**Technologies Used:**

* PySpark Core: For data processing and transformation.
* SQL: For complex data analysis and querying.
* Hive: For data storage and querying.
* Tableau/Power BI: For data visualization and reporting.
* Python: For data manipulation and machine learning.

**Project Scope:**

* Collect historical bot interaction data from various sources.
* Process and clean data using PySpark.
* Perform data analysis using SQL.
* Store processed data in Hive.
* Visualize insights using Tableau or Power BI.
* Implement machine learning models for predictive analytics.

**Expected Outcomes:**

* Comprehensive analysis of bot performance and user behavior.
* Interactive dashboards and reports for stakeholders.
* Insights to optimize bot responses and enhance user experience.
* Predictive models for future bot performance and user interactions.

**Project Requirements**

* **Data Collection:** Historical bot interaction logs from various sources
* **Infrastructure & Tools:** PySpark, SQL, Hive, Tableau/Power BI, Python
* **Data Processing:** Cleaning, transformation, sentiment analysis
* **Data Analysis:** Performance metrics, trend identification, SQL querying
* **Predictive Analytics:** Machine learning models for bot improvements
* **Visualization & Reporting:** Interactive dashboards, trend graphs
* **Deployment & Optimization:** Real-time tracking, automated refinement