AI-Powered Developer Performance Analytics Dashboard

Objective

Develop a Streamlit-based dashboard that provides insights into developer performance using data from an open-source GitHub repository. The system should focus on collecting and analyzing GitHub data, calculating performance metrics, and implementing a natural language interface for querying these metrics.

Methodology

- ✓ Data such as issues, pull requests, and commits were collected using the GitHub API.
- ✓ The data which was collected from the data collection module was loaded into Pandas DataFrames using helper functions. So based on this data, performance metrics were calculated for the repository.
- ✓ An interactive dashboard was created using the Plotly visualization library integrated within a Streamlit application.
- ✓ Cohere's advanced API processed user queries by providing relevant results based on the repository's data.

Key Findings

- ✓ Performed Data collection by getting the URLs from multiple repositories.
- ✓ The system effectively fetched all the data about the given repository URL.
- ✓ Calculated metrics were visualized clearly and represented in the dashboard.
- ✓ NLP – Module successfully responded to the requests/questions raised by the user.

Recommendations

- ✓ Need to expand the data size by accessing high-complexity repositories like ultralytics.
- ✓ Need to use secure methods for storing the API keys.
- ✓ Need to process multiple URLs for the last three modules.

Conclusion:

Thus, the project combined all the modules successfully as well as this project taught me the importance of consistent effort and dedication towards our goal.