Welcome!

We are team 10 and our final project is github Viz

We chose to do this project as currently github provides insights about the status of various projects but these insights are limited to each repository.

Hence, we developed an analytics portal which mines Github repositories and displays relevant data related to projects, processes and people.

We have designed and developed this analytics portal for managers, team leads, architects and any decision makers in an organization. It would help them analyze performance of projects and developers on various technical and non technical aspects.

This portal was developed for managers as they need to

Plan future projects based on status of current projects

Acknowledge employees for their contributions and

Generate reports for higher-level management

The portal offers features to keep track of :

Commits -> In order to understand Developer’s contributions to the repositories

Issues -> To provide a measure of bugs that were created and fixed along with time for resolution and

Libraries -> For the understanding of new libraries used in Java, Python, C or C++ files

The portal’s front end has been designed using HTML and CSS. In the backend, Python scripts are used to extract data from GitHub repositories and the data is stored in a MySQL database. Data is ingested into the MySQL server through a job that runs once every week The visualization of data takes place in Tableau for the selected repositories. Integration of the front end and back end requests is streamlined using Flask.

Let us now see a short demo of our use cases :

We have three use-cases, let us see the first usecase

As you navigate through the application, you can find a list of repositories for which you can generate visualizations. Let us now select a few repositories.

Let us now see the visualization.

We can see the modifications that have taken place over time for various repositories along with the developers associated with the modifications.

On the right hand side, we see the size of each modification which also helps us understand how each of the repositories are scaling.

The next use case is issues, here we are dealing with the issues that have been tagged as bugs.

We see the issues that have been closed in the repositories. From the visualization on the right hand side, we understand the developers who have closed the issues. We also the time taken to close the issues. This helps in understanding the complexity of the issue.

The third use case is libraries. We see here the new libraries that have been introduced in the Java and Python files. The pie chart also show the distribution in the use of these libraries.

Their names are listed on the right hand side.

Libraries give insight into new interesting new technical developments.

Thank you so much for watching.