Creative Project

Description:

To develop an interactive dashboard for data visualization.

Technologies proposed – D3.js, Python, Flask, MongoDB

Rubrics:

The dashboard is meaningful representation of the data – 5 points

Each chart/graph represents a different set of data – 5 points

Database

- Create static MongoDB database – 10 points

- Store and access data using queries – 5 points

- Interact with database using python – 5 points

Server

- Develop a server in Flask – 15 points

UI

- Use JavaScript library/libraries for user interaction using D3 - 30

- Graphs and Charts

1. Extract data for displaying a total of 3 different graphs/charts

2. Render graphs/charts on UI

* ***Best Practices (Any 20 out of 33 Points mentioned below as applicable):***
  + Code is well formatted and easy to read, with proper commenting (4 points)
  + The site follows the FIEO philosophy (3 points)
  + All pages pass the W3C validator (3 points)
  + Code is well formatted and easy to read, with proper commenting (2 points)
  + If storing passwords, they are stored salted and encrypted; if using OpenID, you are storing the user's OpenID identifier in the database (2 points)
  + All AJAX requests that either contain sensitive information or modify something on the server are performed via POST, not GET (3 points)
  + Safe from XSS attacks; that is, all content is escaped on output (3 points)
  + Safe from SQL Injection attacks (2 points)
  + CSRF tokens are passed when performing at least 2 user actions (3 points)
  + Session cookie is HTTP-Only (3 points)
  + Page passes the W3C validator (2 points)
  + Your code passes *JSHint* or *JSLint* (3 points)
* ***Usability (5 Points):***
  + Site is visually appealing (5 point)