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CSC-415
Assignment 5

Project Requirements

Modularity & Encapsulation of Data:

The aim of the project is to grow after being released as open-source. Besides the project being expanded upon, the open-source nature will allow code to be re-used for other projects. This requires the project to be modular and reusable.

One core example of how the project aims to support modularity is in the architecture of the application. The project is split, having both code for a front-end as well as back-end. Having the back-end separate allows the back-end to be accessed via an API. This means, if the project is to expand to mobile platforms, those platforms will just need to address their own front-end and utilize the API to add functionality.

The back-end itself will make use of Rail's elegant class systems to facilitate information hiding.

Elegance & Efficiency of Algorithms:

The elegance of algorithms directly relates to user experience with the application. This project will ensure efficient algorithms are used to display statistical analysis, giving the user instant feedback where possible.

Data Structures:

The appropriate data structure can make or break an application. An ill-fitting data structure will slow down control operations and degrade the experience for the user. The use of a database in this project is justified. The nature of the application to update submissions while multiple users are connected is possible through a well-structured back-end using a database.