

Student Code Online Review and Evaluation

Charlie Collins, Thomas Gingerelli, Logan Klaproth, Michael Komar

Faculty Advisor(s): Dr. Raghuveer Mohan, Dept. of Electrical Engineering and Computer Science, Florida Institute of Technology

Goal

The goal of the Student Code Online Review and Evaluation (SCORE) application is to provide a more robust code submission platform, and to bring concepts of competitive programming to Florida Tech’s Computer Science department.

Motivations

To resolve the following pain points for both professors and students:

- Students**
- Cumbersome login process.
 - Delayed results
 - Minimal feedback for test cases
- Professors**
- Lack of automated testing
 - Limited ability to create assignments

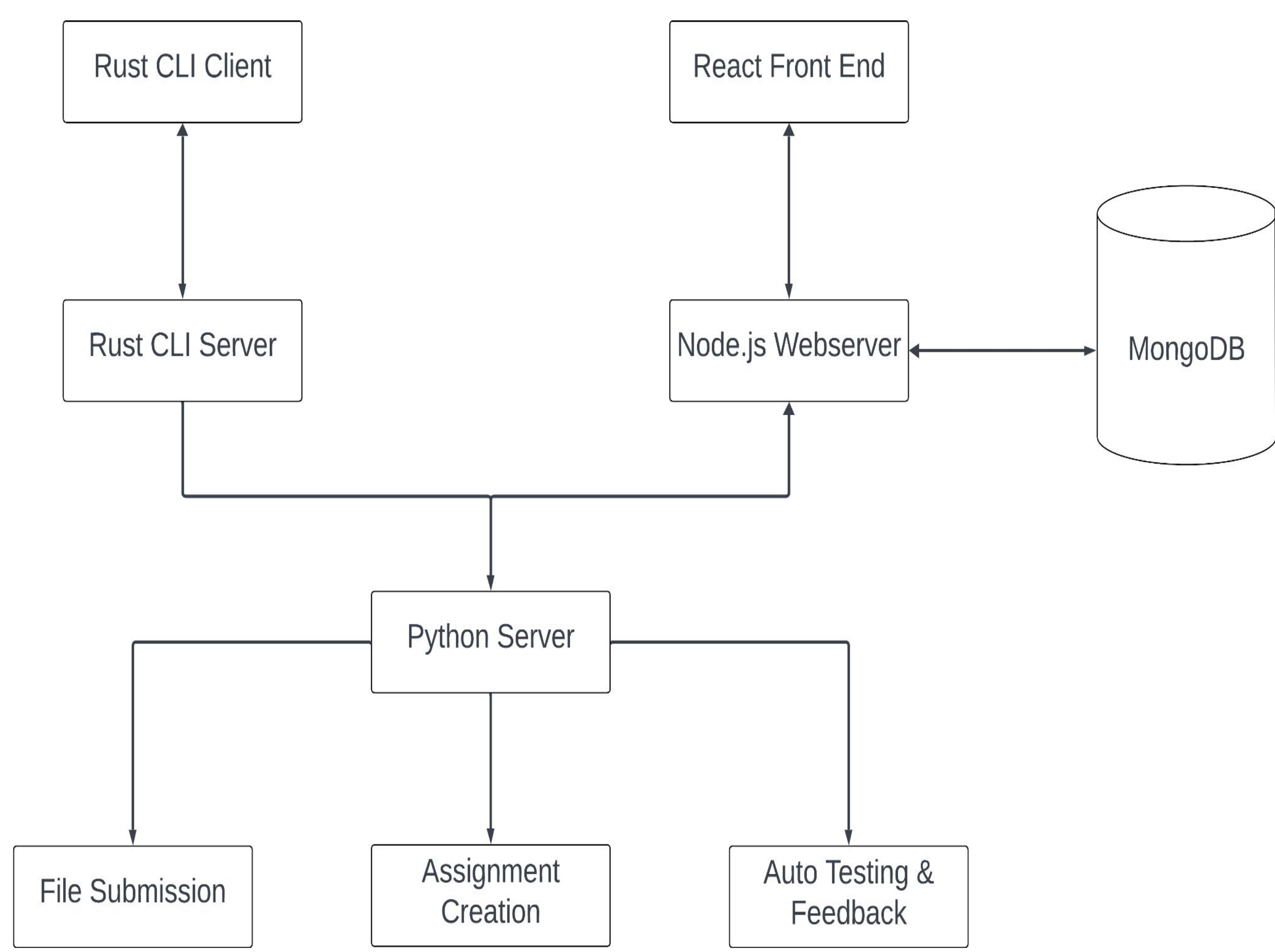
Implementation

- Web App: React + Node.js + Express
- Command line client: Rust
- Auto test management: Python
- Database: MongoDB
- Container: Docker

Features

- Two User Interfaces:
 - Command Line Shell Application
 - Web Application
- Sign in with Google
- Auto-testing of Submissions in Docker
- Submission feedback including:
 - Auto test score
 - Test case specific feedback
- Portal for grade exporting

System Design Diagram



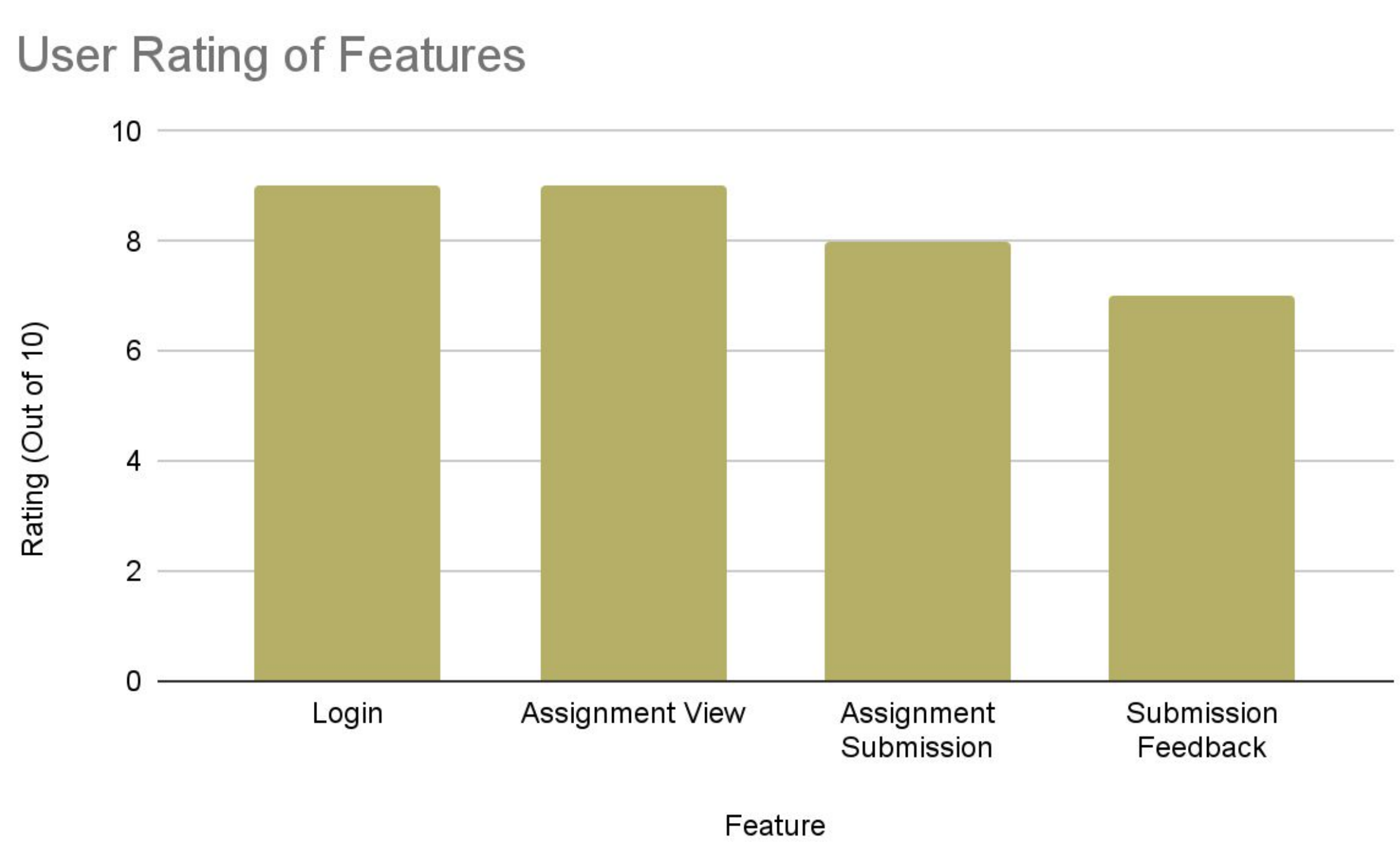
Future Improvements

- Canvas API Integration
- Stanford MOSS integration
 - Visualization of pairwise similarity
 - Data clustering
- Official Deployment
 - VPN Access
 - Florida Tech CAS user authentication


Limitations

- Support for only select languages
- Pre selected packages
- Single file submissions
- Must have a gmail account

Evaluation



Web Interface



Classes

cse2050

cse1001


cse2010

S.C.O.R.E

cse1001

Assignment Traffic Jam

Due: 2025-04-30	Submitted On: 04/18/2025	Score: 0/1
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Classes

cse2050

cse1001

cse2010

S.C.O.R.E

Traffic Jam

Assigned: 2025-04-18	Due: 2025-04-30
Highest Score: 0/1	View Most Recent Submission

Description

You are managing a transportation network of one-way roads between cities. People travel through the transportation network one by one in order all starting from the same city, and each person waits for the person before them to stop moving before starting. The people follow a simple algorithm until they reach their destination: they will look at all the outgoing roads from the current city, and choose the one that leads to the city with the smallest label. A person will stop when they either reach their destination, or reach a city with no outgoing roads. If at any point someone fails to reach their destination, the rest of the people still waiting in line will leave. Before each person enters the transportation network, you can permanently close down any subset of roads to guarantee they reach their destination. The roads that

Attempt 1

0/1

Submitted: 04/18/2025