COM S/SE 319 : Construction of User Interfaces - Spring 2021

Individual Report for 2st Release

Project Title: Canvas++

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Group: G37

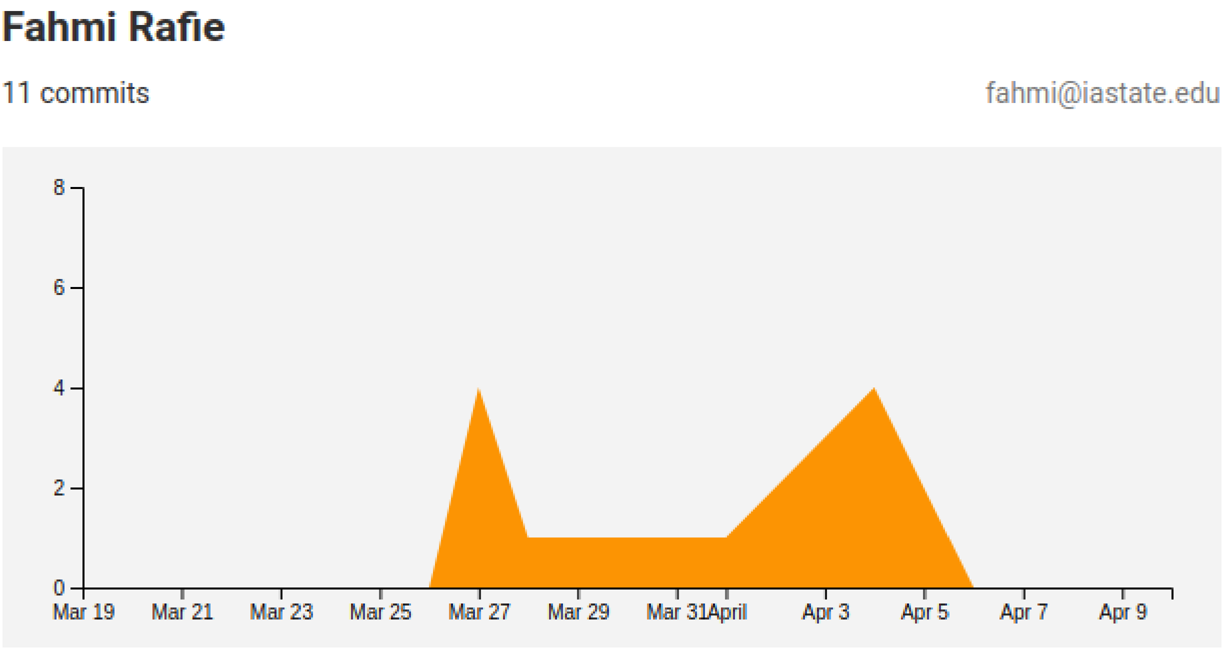
Individual Contribution and Role Description for 2st Release

- Worked on story card 8: Setup API routing between frontend, and backend
- Description: [INTERNAL USER] As a developer, I would like to use the CanvasAPI to pull assignments and quizzes for individual students
- Tasks implemented:
    - Install `marshmallow` on the Flask backend server using `pip install marshmallow`
    - Implement CORS on the Flask backend server by installing it: `pip install flask_cors`, and wrapping the app with CORS: `CORS(app)`
    - Establish API route on the Flask backend server at http://coms-319-g37.cs.iastate.edu:8080/events
    - Set up API route on the React frontend server using Axios
    - Configure Flask server to find all the events (assignments, quizzes) from a specific Canvas user
    - Include events due date, points possible, their course ids, and course names
    - Formatted the events and their attributes in JSON
- Issues:
    1. Earlier, we tried to make API calls to the Canvas API using only the React frontend server, but we received a CORS error. Upon further research, the problem stems from the browser's security system that disallows some scripts from running. Therefore, our scripts that contain the API calls could not be executed. The solution is to create a backend server, and we found an appropriate Python library for the Canvas API. There, we can simply set up CORS using a few lines of code
    2. Every team can edit the React frontend server files in the provided remote server. However, this requires an extra level of expertise that might delay the project. Therefore, for faster development, I set up the Flask backend server to be accessible anywhere within the ISU network at http://coms-319-g37.cs.iastate.edu:8080. Now, every team member can run their

React frontend server on their local machines, and make changes easily without editing files on the remote server

3. When sending a GET request to http://coms-319-g37.cs.iastate.edu:8080, the response should be a list of all events (assignments and quizzes). This proved to be more difficult than expected without using additional libraries. To simplify, I installed `marshmallow` which allows me to create a schema class called `Event` and append every event to a list, `eventList`. Then I simply used `json.dumps(eventList)` to create a list of events in JSON format

- GIT Statistics/Analytics:

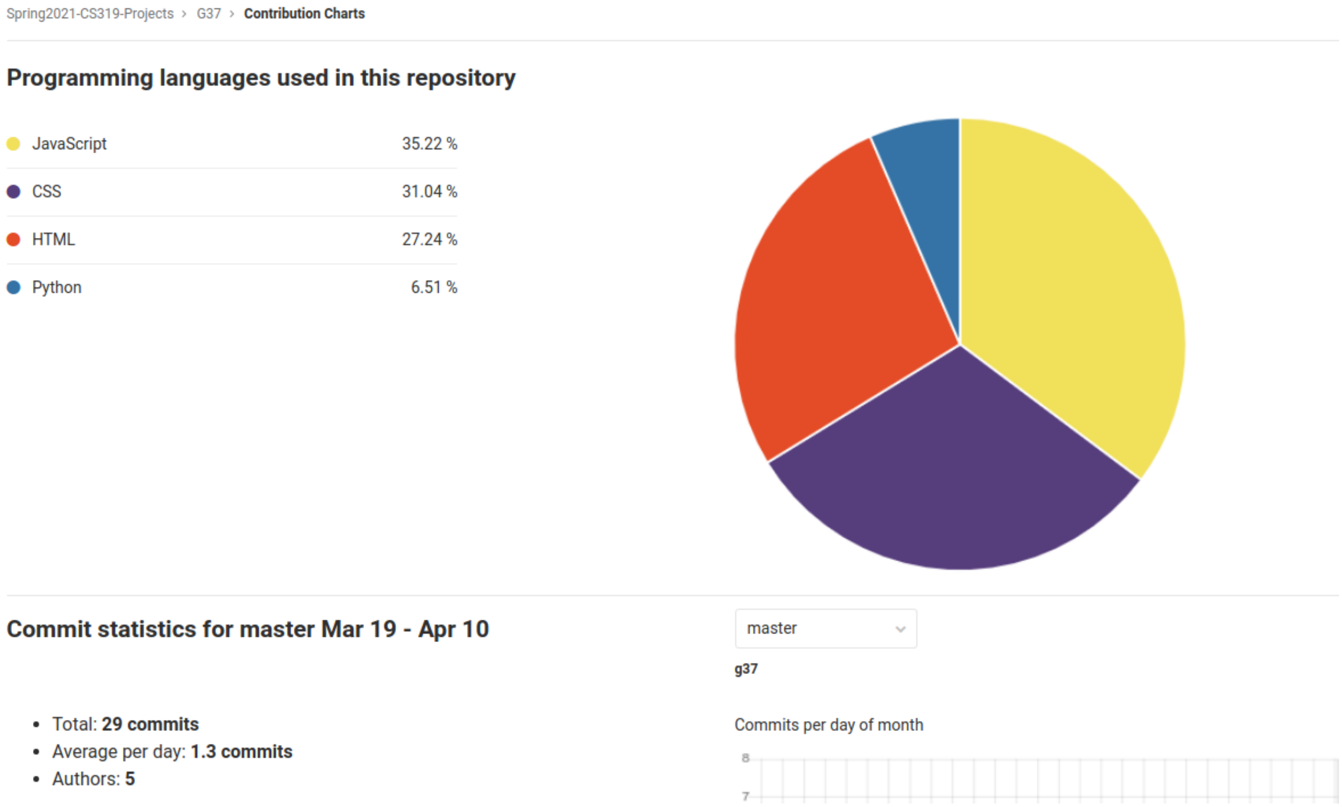


Fahmi Rafie

11 commits

fahmi@iastate.edu

Figure 1: *My Contribution*



Spring2021-CS319-Projects › G37 › **Contribution Charts**

Programming languages used in this repository

●	JavaScript	35.22 %
●	CSS	31.04 %
●	HTML	27.24 %
●	Python	6.51 %

Commit statistics for master Mar 19 - Apr 10

master

g37

- Total: **29 commits**
- Average per day: **1.3 commits**
- Authors: **5**

Commits per day of month

Figure 2: *Analytics*