SW Engineering CSC648-848 Fall 2023

SFSU TutorLink

Team 02

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Lars Severson - Frontend

Milestone 5

Submitted	**Revised**
12/13/23	

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1. Product Summary:

Product Name: SFSU TutorLink

Product Description: Introducing SFSU TutorLink — a revolutionary web-based platform tailored to address the unique challenges faced by San Francisco State University (SFSU) students beyond the classroom. Our platform connects SFSU students with experienced tutors who have successfully navigated the intricacies of different timetables, side jobs, and school-life balance, ensuring they are best equipped to help peers swiftly learn and excel in their courses. With a user-friendly interface, students can schedule their tutoring sessions through our messaging system, and link up with tutors matching their timetables and goals. While this may not immediately seem tightly connected to SFSU, we demonstrate our commitment to the community through unique offerings. These include the ability to search through your courses and tutors, adherence to all SFSU guidelines, and our focus on fostering connections within the community, thereby making our university a more supportive and collaborative learning environment.

ALL major committed functions:
Priority 1 (Necessary):

1. Unregistered User:

1.1. Unregistered users shall be able to register for one and only one account by using their "@sfsu.edu" email
1.2. Unregistered users shall be able to search for a tutor by subject
1.3. Unregistered users shall be able to search for a tutor by class
1.4. Unregistered users shall be able to browse tutors
1.3. Unregistered users shall be able to view a tutor's photo
1.4. Unregistered users shall be able to access a tutor's resume

2. Registered User:

2.1. A registered user shall be able to login
2.2. A registered user shall be able to request a new password
2.3. A registered user shall inherit all functions available to an unregistered user
2.4. A registered user shall have one and only one dashboard
2.5. A registered user shall be able to send a message to a tutor
2.5. A registered user shall be able to submit an application for becoming a tutor
2.6. Tutors shall be able to upload one and only one picture
2.7. Tutors shall be able to upload one and only one resume

3. Messages:

3.1. Messages shall be able to be created by a user

3.2. Messages shall be able to be received by one and only one tutor

4. Dashboard:

4.1. The dashboard shall display zero to many of a registered user's tutor postings

4.2. User shall be able to view sent and received messages in the dashboard

5. Admin:

5.1. Admin shall be required to approve tutor applications prior to going live

5.2. Admin shall be required to deny inappropriate tutor applications

5.3. Admin shall be able to block users

Say what is unique in your product: Our app is unique in its SFSU-specific offerings. Students can search through their own courses and tutors, and they are linked with past students of those same courses, who can tailor their classes to the SFSU courses. This foundation enables us to focus our efforts not only on refining and improving these core elements but also on innovating and expanding upon them to deliver an exceptional and highly personalized learning journey that sets us apart from the competition.

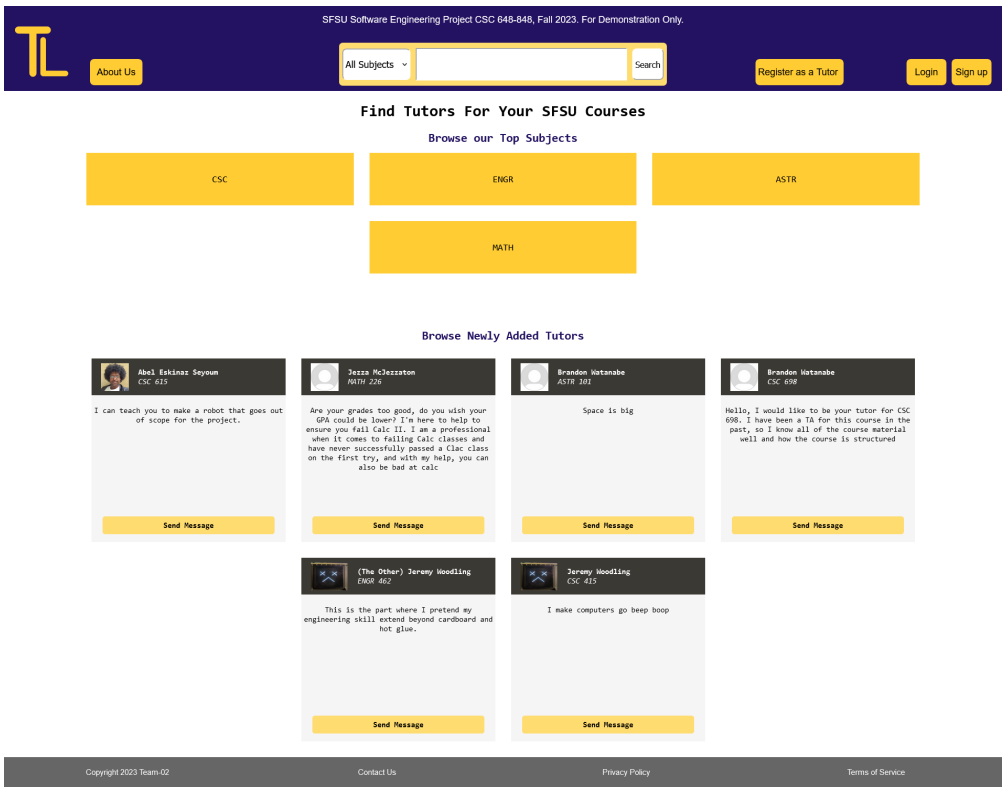
Product URL: http://54.177.167.160/ (Subject to change due to AWS issues)

2. Milestone documents:

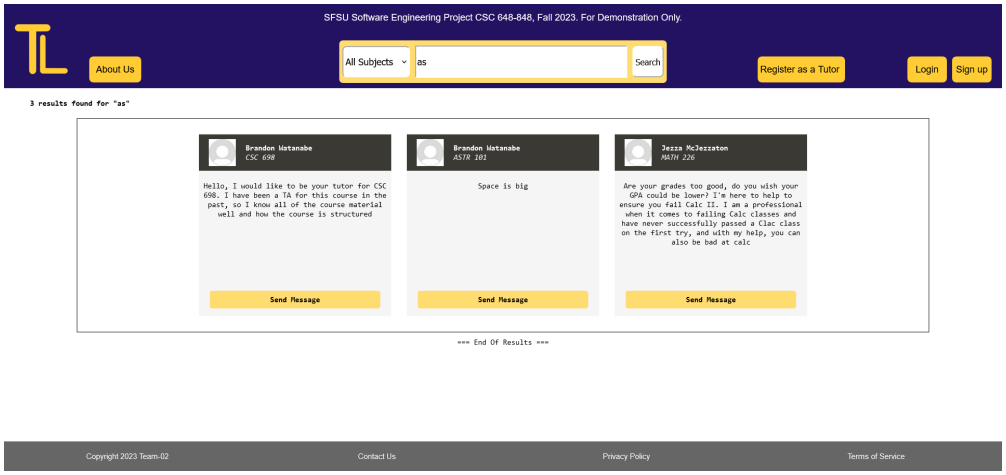
(Starts on the following pages)

3. Product Screenshots:

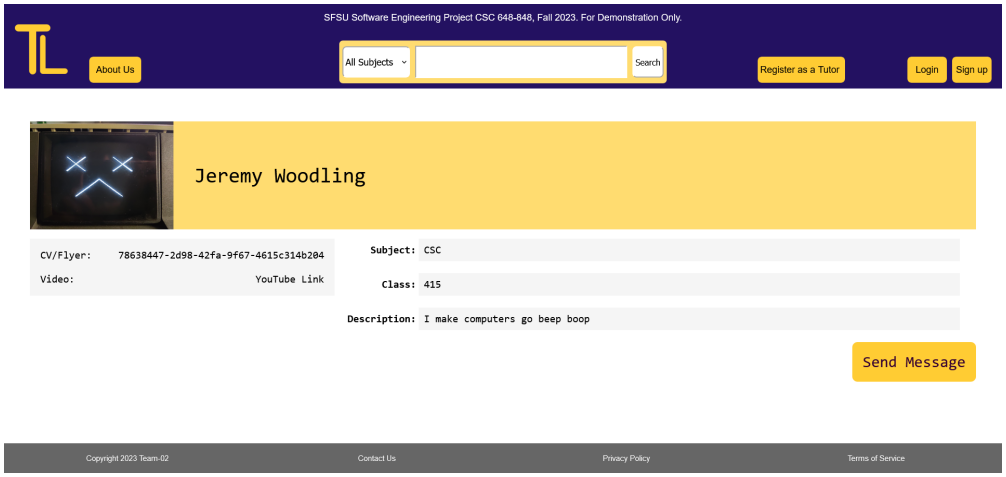
Home Page:



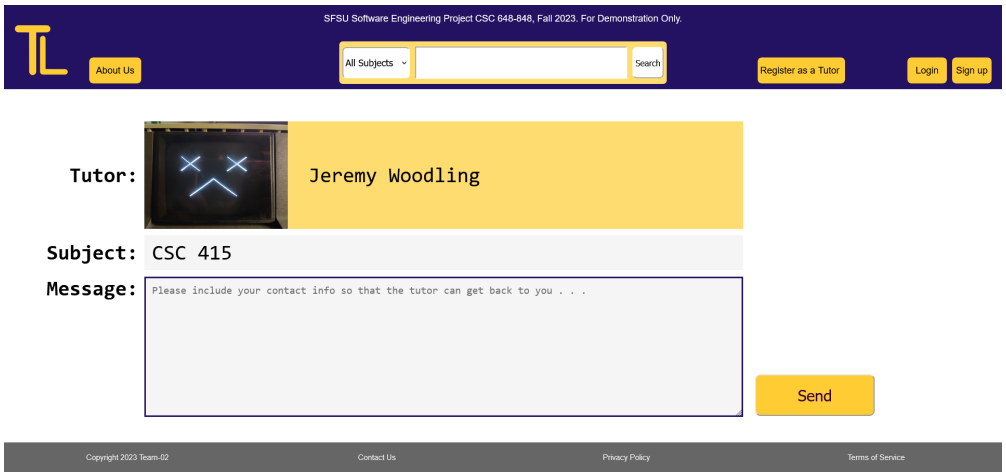
Search Results:



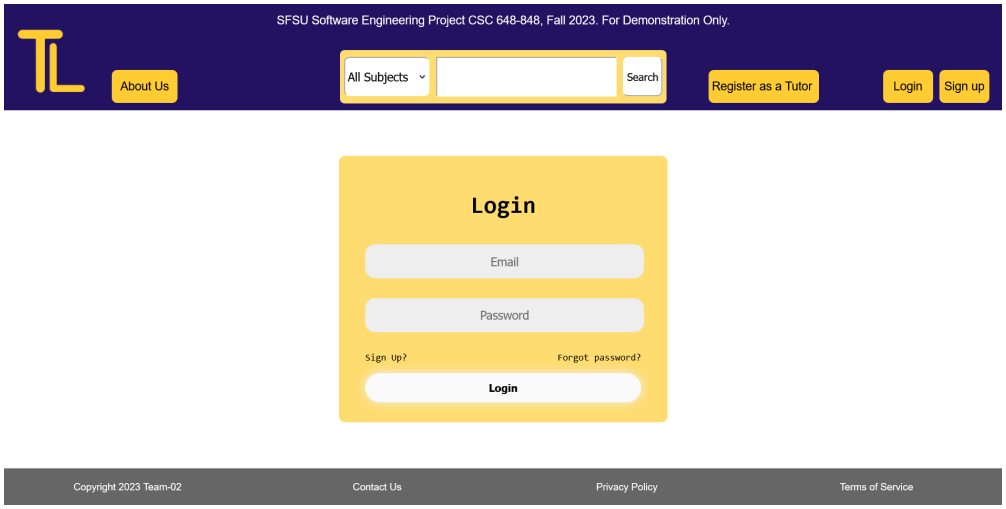
Tutor Profile:



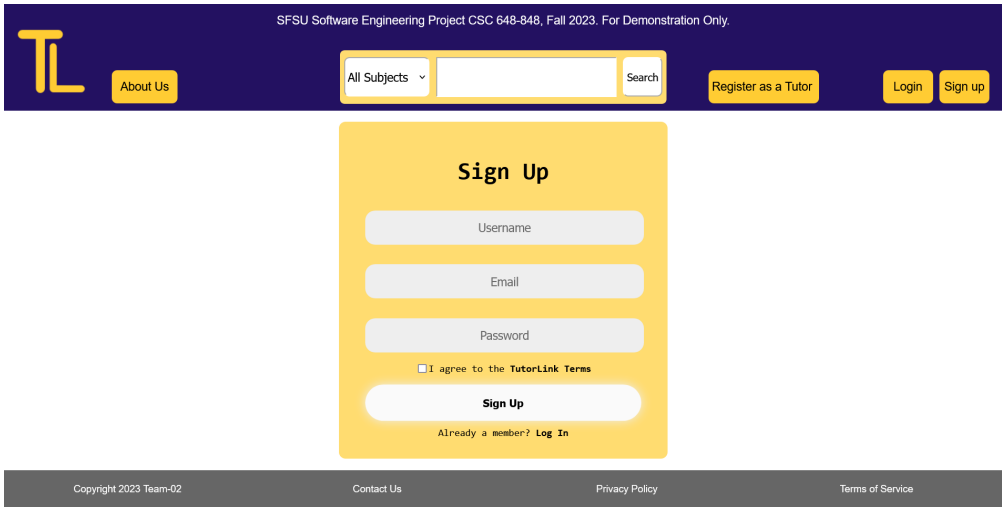
Send Message:



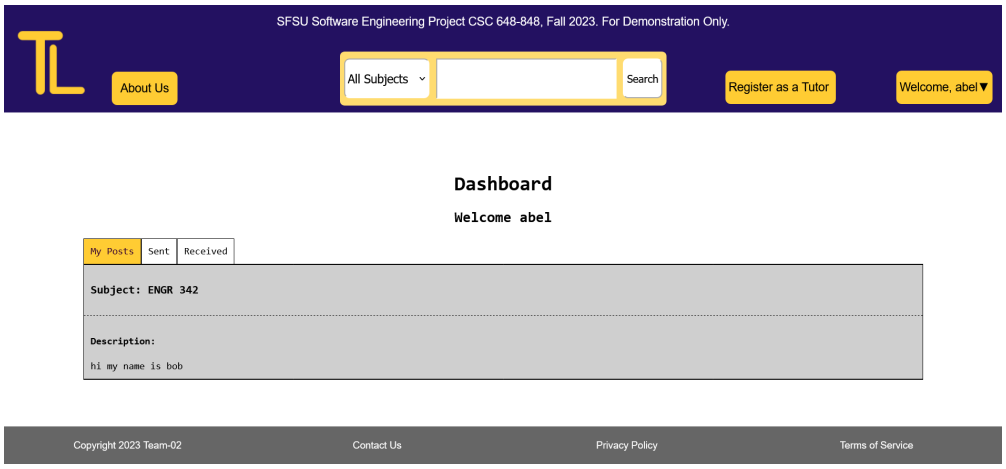
Login:



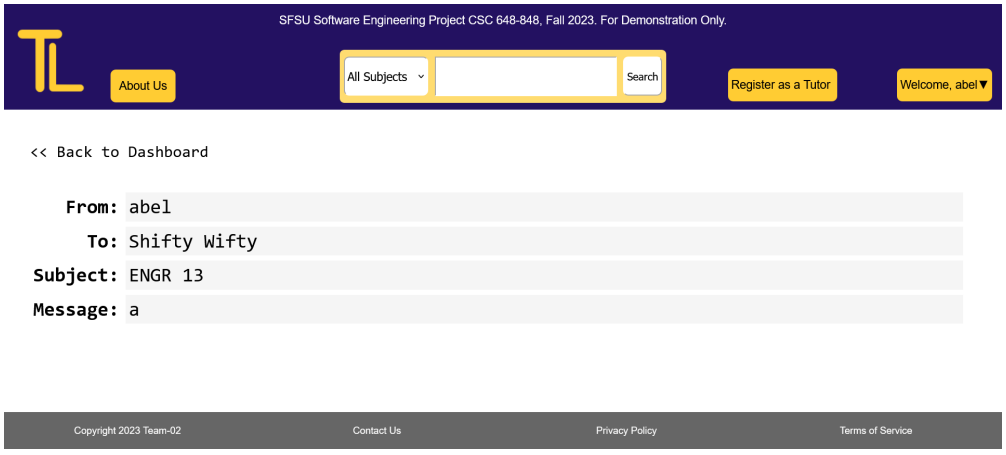
Signup:



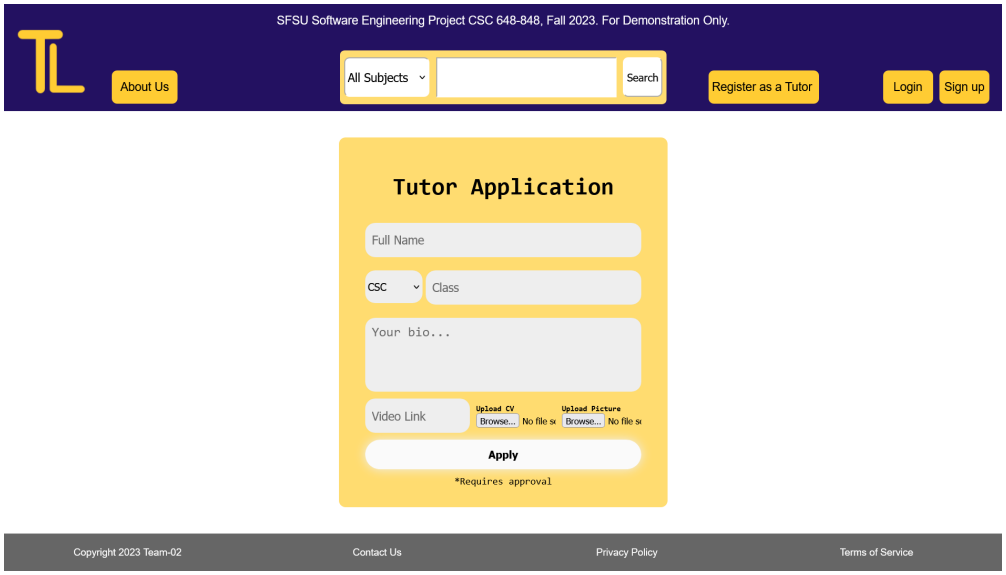
Dashboard:



View Message:



Tutor Application:



About:

4. Database Organization:

This database is structured to manage users, subjects, tutors, messages, and tutor requests. There are several tables defined as models in SQLAlchemy. The User table holds information about users, including their unique ID, username, hashed password, and email. The Subject table contains different subjects identified by a short and long description. The Tutor table connects users with tutor-specific details such as a bio, CV, photo, video, and the subject they teach. Messages sent to tutors are managed by the Message table, linking messages to specific tutors and students. Additionally, there's a Tutor_Request table designed to hold information about users who wish to become tutors, pending approval. ForeignKey relationships establish connections between tables, facilitating data retrieval and management across various sections of the database.

User Table:

```
1 •  SELECT * FROM prod.user;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

user_id	user_name	user_pw	user_email
1	fakeuser	your_password_hash_here	fakeuser@example.com
2	test	pbkdf2:sha256:600000$zI5aWhJQ40LYMEz2$0...	test@sfsu.edu
3	Brandon Watanabe	pbkdf2:sha256:600000$cycQEpXSKH6Uht6E$6...	bw@sfsu.edu
4	Jezza	pbkdf2:sha256:600000$WcydH6n5CmjOcUk3$c...	test_user@sfsu.edu
5	Abel Seyoum	pbkdf2:sha256:600000$rEea0SmV85YU5Srl$3a...	aseyoum@sfsu.edu
NULL	NULL	NULL	NULL

Subject Table:

Limit to 1000 rows

```
1 •  SELECT * FROM prod.subject;
2
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

subj_id	subj_short	subj_long
1	CSC	Computer Science
2	PHYS	Physics
3	ENGR	Engineering
4	ASTR	Astrology
5	MATH	Mathematics
6	BIO	Biology
NULL	NULL	NULL

Tutor Table:

```
1 •  SELECT * FROM prod.tutor;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

tutor_id	tutor_user	tutor_name	tutor_bio	tutor_cv	tutor_photo	tutor_vid	tutor_subj	tutor_subj_num
1	4	Jeremy Woodling	I make computers g...	78638447-2d9...	78638447-2d98-42fa...	https://youtu.be/dQw4w9WgX...	1	415
2	4	(The Other) Je...	This is the part wher...	NULL	ca0bb26c-733d-40dd...	https://youtu.be/dQw4w9WgX...	3	462
3	3	Brandon Wata...	Hello, I would like to ...	4368eb62-726...	NULL	NULL	1	698
4	3	Brandon Wata...	Space is big	NULL	NULL	NULL	4	101
5	4	Jezza McJezzaton	Are your grades too...	NULL	NULL	https://youtu.be/iUuafesulN8?...	5	226
6	5	Abel Eskinaz Se...	I can teach you to m...	982b3188-4af...	982b3188-4af5-4e98...	https://www.youtube.com/wa...	1	615
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Message Table:

```
1 •  SELECT * FROM prod.message;
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

msg_id	msg_tutor	msg_student	msg_listing	msg_text
1	3	3	4	e
2	4	3	1	need help with beep boop
3	4	4	1	Testing stuff
NULL	NULL	NULL	NULL	NULL

Tutor Request Table:

```
1 •  SELECT * FROM prod.tutor_request;
2
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

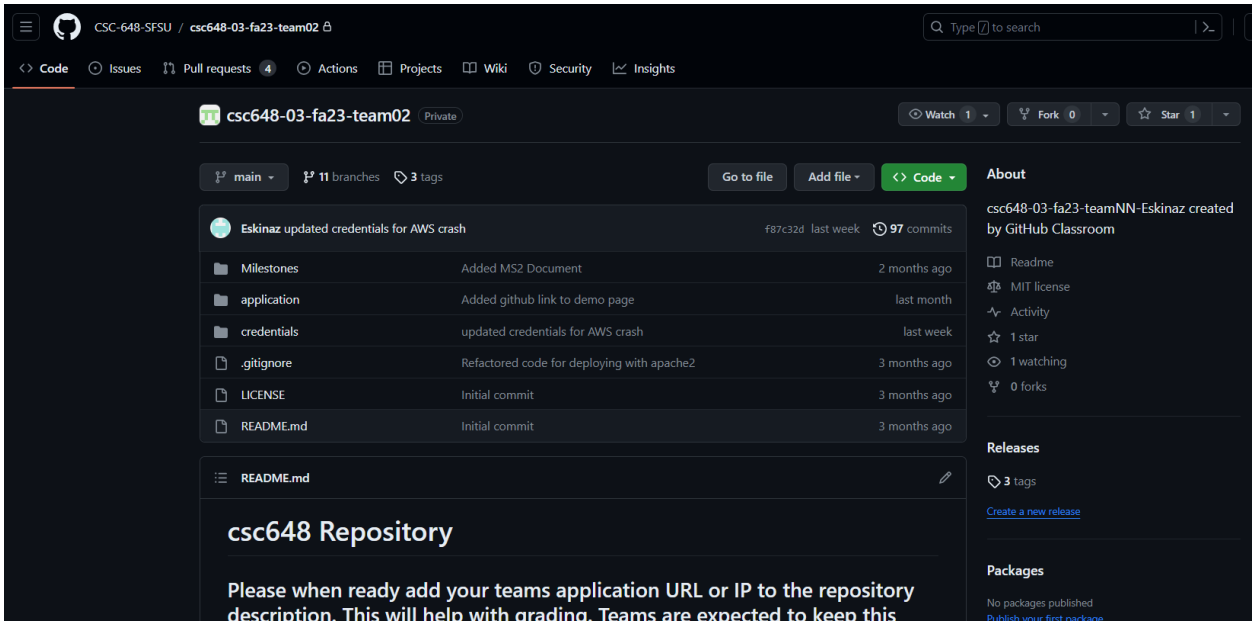
tutor_id	tutor_use	tutor_name	tutor_bio	tutor_cv	tutor_photo	tutor_vid	tutor_sul	tutor_subj_nur
7	5	Waiting Tutor - DONT AP...	DO NOT APPROVE ME, I am just for...	b5308da9-...	b5308da9-d9ce-...	https://www.you...	6	1234
NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

5. Github Organization:

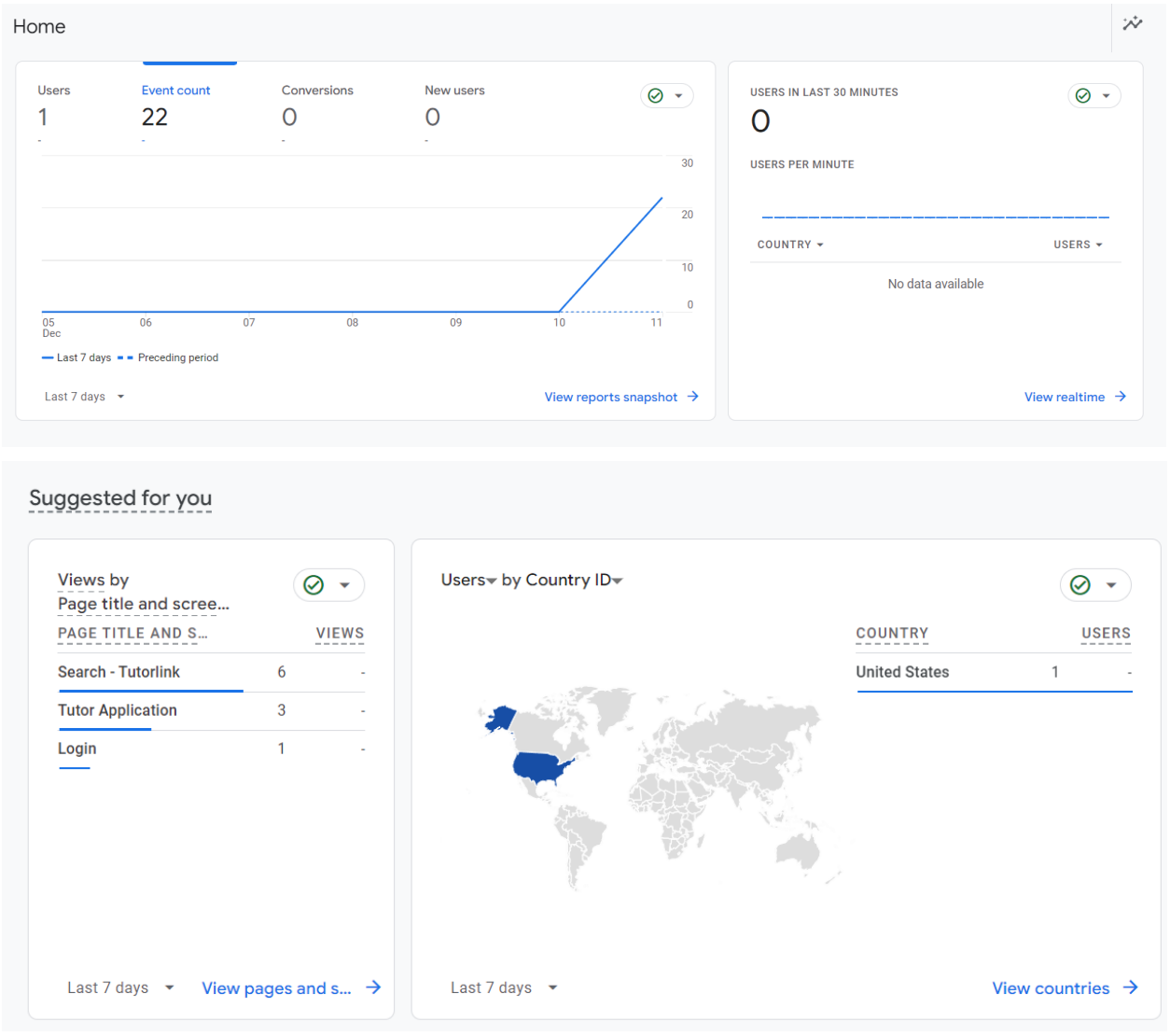
Main Branches:

Name	Purpose	Branches From	Merges To	Protections on merging to it
main	Code that is currently live in production			- Jeremy & Abel only - 1 review required
dev	Our work in progress branch.		- review	- 1 review required
hotfix/x	Used for fixes to production code	- main - dev	- main - dev	- none
feature/x	Branch that was created by an individual for a specific purpose.	- dev	- dev	- none

Team Github home page:

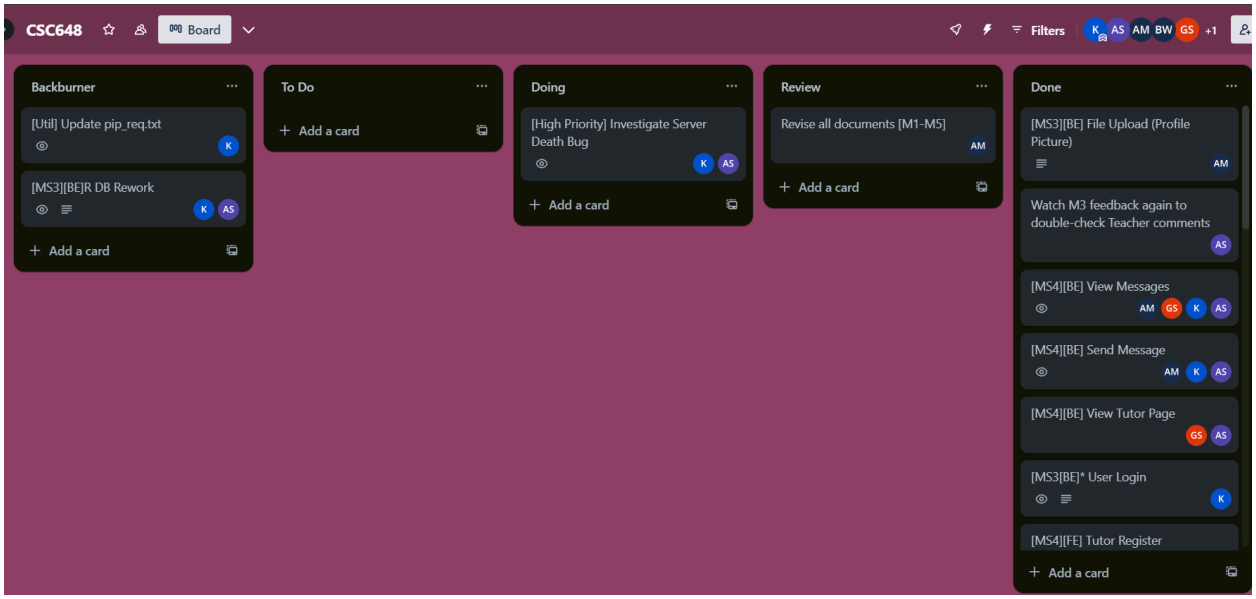


6. Google Analytics:



7. Project management:

For communication across our project we have been using a Discord server with different communication channels for team members and things to develop. As a task manager for the project we used Trello. As work progressed, developers moved tasks around to different stages of development. Tasks were named with their milestones and the team in charge of it. This is a snapshot of our tasks on Trello as of December 8th:



8. Team member self assessment and contributions:

Jeremy Woodling - Team Lead

Sent to : aseyoum@sfsu.edu, amukherjee1@sfsu.edu, bwatanabe@sfsu.edu, lseverson@mail.sfsu.edu

For the project, my main role was team lead, but I also did a good bit of work on the backend as I was the most experienced with our backend. For the backend, I worked on;

- Base Project Layout
- Tutor Application page
- User Login/register page
- Search Page
- Apache2 Server Setup
- Ubuntu Server Setup
- Database Layout

In total, I made 20 commits to GitHub (~1.4k++, ~700-- lines) as of the current dev branch.

I encountered a good handful of issues during this project but nothing too horrible. The early on issue want to deal with the early project setup myself. This is because I know any error from this time would be exponentially worse to fix and could create issues with the project as a whole. This was a slight trend for the backend because sometimes it is easier to make something correctly the first time than fix someone else's code. Next time I would not do this if possible, instead I would take the time to make it while in a meeting with the team. This would give them a chance to see what the code does in detail and the general coding style to follow (and why to follow it). They would also see where I was cutting corners for a temporary code and use that code spairly. Sadly, I did not have the time for this, nor the foresight to see its importance.

My next issue was about being a team lead. I am very used to leading in my current work environment, which has a much more strict hiring process. Because of this, I am used to people being able to work with a sense of initiative and urgency. That wasn't entirely the case and led to a handful of issues. Although I provided an example website I had made for work (not to copy from but if you understand the code and coding style of the example code, this project would be pretty simple) which went mostly neglected until far too late into the project. And since it was a larger system, comparable to this project, learning it is something that would take time. I would focus on the urgency of learning the framework early on from a leader's perspective. I think in general, I would focus more on teaching as much as possible. There were issues where team members would show issues when working with our various management programs (eg. Trello or Discord) along with designing and enforcing better standards for using said programs.

My final notable issue was with role distribution. I had just let people fall into roles based on who volunteered, that was not a good idea. If given another chance I would take a bit more time to see who fit the role best. Ideally, a test that involves reviewing sample code to see who can adapt to it best.

Cheers,
Jeremy W

Abel Seyoum - Github Manager

Sent to : amukherjee1@sfsu.edu, bwatanabe@sfsu.edu, lseverson@mail.sfsu.edu, jwoodling@sfsu.edu, gvillarsanchez@sfsu.edu

My contributions to the team project are:
- setting up AWS
- created base layout/navbar/footer for pages to use
- tutor profile page
- front and backend for sending messages
- front and backend for viewing messages
- backend for dashboard
- backend for flash messages

Aside from these, I was also contributing to some documentation and generally just making sure all our stuff adhered to specs and stuff said in class.

My number of submissions to github are: 78 commits

Challenges encountered for me were trying to meet specifications in an efficient manner. Sometimes, what I wanted to do made sense to me but did not stand under the conditions we're working in. But aside from that, this project just reaffirmed my dislike for working with CSS.

Something I would do better is to be more proactively communicating. As the github manager, I could have been ahead of some questions if I had just talked about some things earlier. I definitely could have gotten us to be more responsive about properly dealing with each other's code.

Brandon Watanabe - Front End Lead

Sent to : aseyoum@sfsu.edu, amukherjee1@sfsu.edu, lseverson@mail.sfsu.edu, jwoodling@sfsu.edu

My role for this project was "Front-End Lead." The duties that fell under my role were
- Overseeing the visual design of the product
- Organizing the Figma prototype
- Home Page
- Search Page
- Partials for tutor posts
- Fixes for navbar and tutor application
- Giving feedback on pages made by other members
- Worked on and reviewed documentation

As of right now, I have made 38 commits to the dev branch.

Issues I faced during this project were having to learn how to use Jinja2 templates and SQLAlchemy as I have never used Python to work with a database before. Although I am experienced in Python, this was all new for me. Another issue I faced was a lack of clear understanding of what functionality the end product needed to have and not have. There were times when the instructions were unclear in what was expected from the team and it led to a lot of uncertainty about the final goal of the project. Finally, I had a lot of trouble getting the carousel to be animated. At first I tried to do this with vanilla JS and CSS, but that was very difficult and frustrating. I then tried using both Slick Carousel and Bootstrap, but those both caused formatting issues with the navbar and we could not figure out the reason so we decided to scrap the carousel and just use simple cards.

Something I would do better next time is (of course, as always) better time management. Often I found myself feeling like I was cramming a few weeks worth of work into a couple days. Part of this came from having a lot of work from other classes, but some of it came from feeling burnt out on this project. I did not feel a real connection to this project that motivated me to work on it. Instead, I feel that I only worked on it when I absolutely had to. I believe that a way to remedy this issue would be to allow teams to pick their project topic. In doing so, the students would be able to have a greater connection to their work and in turn, be more motivated to see it succeed.

Best,
Brandon Watanabe

Ankita Mukherjee - Backend Lead

Sent to: jwoodling@sfsu.edu, aseyoum@sfsu.edu, bwatanabe@sfsu.edu, lseverson@mail.sfsu.edu

Self-assessment and contributions: Ankita Mukherjee

1. M0: Created the Team Website including the ABOUT home page and individual pages. Worked on both backend (about.py) and frontend files (about_list.html, about_template.html).

2. M1: Designed key personas (student, tutor, and admin) for general characteristics, goals, skills, pain points, and main Use Cases (Student seeking assistance, Tutor signs up to help, User accessing their Dashboard, Admin moderating the tutors).

3. M2: Developed search and view tutor HTML pages for Vertical SW Prototype. But, later redesigned these pages. Worked on document writeup.

4. M3: Conducted thorough testing of horizontal and vertical prototypes, addressing functionality and use cases such as search field validation, search results, and filtering. Attended the Milestone 3 review meeting, recorded important notes, and developed Appendix II: M3 meeting review summary and development plans.

5. M4: Implemented the functionality for uploading profile photos from the frontend, saving files locally for tutor profiles (tutor.py) and frontend template (upload.jinja2). Compiled an M4 document covering all sections, including the Product summary, Usability test plan, and QA test plan.

6. M5: Revised all documents from M1 to M5, incorporating feedback from the professor to ensure alignment with project objectives.

b) Despite a lower number of GitHub commits (7), my significant contributions to comprehensive documentation, thorough revisions, testing, and essential backend tasks assigned by the team lead underscored my commitment to the project's success.

c) Main challenges: I wish I could have made more commits to GitHub from a backend perspective.

d) In the future, I aspire to contribute more to backend tasks by expressing my interest and applying insights from the software engineering management class.

e) Significant focus on comprehensive document write-ups and rigorous testing was maintained throughout the project, with consistent attendance at meetings, although my assigned backend tasks were limited.

Thank you,
Ankita Mukherjee

Guillermo Villar - Backend

Sent to : aseyoum@sfsu.edu, amukherjee1@sfsu.edu, bwatanabe@sfsu.edu, jwoodling@sfsu.edu, lseverson@mail.sfsu.edu

My contributions to the team project have been more on the document side of things. I wrote and edited the milestone documents, and have done some minor coding fixes whenever I saw them. As I communicated with Dragutin and my team lead, I was having trouble adapting to the workflow of the coding side so I ended up switching to a more administrative work.

The number of submissions to the Github I made was 3. It is a very low number, and I have been aware of it during my working on this project. I have had a hard time adapting to the work environment and the different coding environments the team was using. I did not really understand the tasks I had to do, and those I did understand were often mismanaged by me and the team. I am thankful to the team lead who designed tasks for me to get up to date, but we had some troubles further down the line when introducing other tasks into the teams code due to miscommunication and the difference in understanding of how the coding worked. I really wish I would have been able to help more in this regard, but I ended up assuming a role of taking care of documents, applying small fixes to the code when I saw mistakes and more of an administrative work.

Challenges encountered for me were adapting both to the new coding environment and the workflow. As an international exchange student it has been quite hard for me to adapt to this kind of teamwork. We usually do a bit more of pair programming, and work on tasks together, while I have noticed
that here (I am not referring to this team in particular, they have been very helpful) they tend to take teamwork as more of a way to divide atomic tasks between a group of people. This has been very difficult to adapt to for all my courses here, not only this one.

Something I would do better is try to adapt faster and not let myself get lost in the coding aspect. I would have dealt with my more concrete doubts faster, tried to ask for more help in understanding the code from the professor and fight to keep in contact with the code from my teammates more. It wasnt easy to do in retrospect, but I would try to do it better in a next time.

Thanks to everyone,
Guillermo Villar.

Lars Severson - Frontend

Sent to : aseyoum@sfsu.edu, amukherjee1@sfsu.edu, bwatanabe@sfsu.edu, jwoodling@sfsu.edu

My contributions to the team project were the front-end development for the login, register, and tutor application pages. I created the templates and css for those pages as well as helped link those templates to the backend.

I made a total of 15 contributions however most of these were to other branches than dev. Also sometimes when I pushed my code it would say my name was EdwardDillengre (I have no idea why).

Some challenges encountered for me were... understanding how to use jinja2 and not being able to use JavaScript. A lot of the time I wanted to use Javascript to solve a problem, but I had to refrain from doing so for the sake of sticking to the tech stack we chose for this project.

Something I would change is having a more organized workflow with Github. I struggled to understand at first how to handle multiple contributions and merge conflicts. I think a time taken away from my day set to learn Github would have put me in a much better place.