

Team 25 Product Backlog

TutorsRUs

Team Members:

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Problem Statement:

While lists of tutors exist on other websites and forums for students to scroll through, a list of names lacks the personal connections and individual customizations that TutorsRUs culminates for each user. Additionally, tutors that Purdue students find on tutoring forums might not even have real experience with Purdue classes. Our website would streamline the process of connecting students with qualified student tutors and make it easy for students to schedule a time and place with rated tutors. Beyond tutoring, students have the opportunity to form a support system by connecting and creating study groups with other students in their classes.

Background Info:

Audience

Purdue students today are often in need of external support beyond the classroom, and other Purdue students are willing to help but lack the resources to find those struggling students. Despite the many options out there to find external help, there are no specialized resources for Purdue Students alone besides basic web pages on various Purdue websites. We strive to connect Purdue Students with effective student tutors so that students can get the help that they need.

Similar platforms

Currently, websites and forums like the Undergraduate Student Board Tutor List and Reddit provide lists of tutors and services to students but lack the customizations and user experience that TutorsRU creates. For example, the Tutor List provides an impersonal list of tutors' names, prices, the courses they tutor, and their contact information. Reddit has discussions where Purdue students can see prior conversations about tutoring and also ask additional questions. Varsity Tutors is a website that connects students of all ages with expert tutors from around the world.

Limitations

Websites with lists of tutors have insufficient background information, which would make it difficult for students to decide which tutor is most suitable for them. Once a student has filtered tutors by their desired price range and courses, they often have no other information to help them determine a tutor of best fit. This can lead to a lot of trial

and error when trying to find a reliable and knowledgeable tutor. Discussion pages can also have extremely outdated information about courses and available tutors, and a reply is not even guaranteed for many users. Furthermore, although websites like Varsity Tutors bring students and expert tutors together, tutors who have not taken the Purdue class that they are tutoring for will not be as knowledgeable as a Purdue student who has taken that class. Additionally, these sources do not allow students to connect with other students to form study groups. We address these limitations by requiring detailed information from all users so that students and tutors can overlap in primary languages, desired tutoring locations, courses, number of students tutored, and other customizations. TutorsRUs also includes both student and tutor ratings so that users know which students and tutors are more reliable and active.

Functional requirements

1. As a user, I would like to be able to create and register my account so that the system can identify me.
2. As a user, I would like to be able to log in to and manage my account so that I can easily access my tutoring homepage.
3. As a user, I would like to be able to reset my password so that if I forget it I can recover my account.
4. As a user, I would like to be able to deactivate my account so that if I am no longer providing or requesting services, other users will not see my profile.
5. As a user, I would like to have an account settings page so that I can alter my courses and preferences after creating my account.
6. As a user, I would like to be able to register for both being a student and a tutor, or either so I can access the appropriate services.
7. As a user, I would like to be able to list my courses when creating my account.
 - a. As a student, I would like to be able to list the courses I am seeking tutoring in so that other students can easily find me to connect.
 - b. As a tutor, I would like to be able to list the courses I am offering tutoring in so that students can easily find me.
 - c. As a tutor, I would like to specify what semester I took a course in (ex. Fall 2021) and with what professor.
8. As a user, I would like to be able to list my preferred language spoken and contact info on my page so users can easily find and communicate with me.
9. As a user, I would like to be able to follow other users' accounts so that I can connect with them so that I can form connections within my classes.
10. As a user, I would like to be able to utilize a “mailto” link so that I can email other users directly from their profiles.

11. As a student, I would like to be able to search for all available tutors for my classes.
12. As a student, I would like to be able to find tutors that are teaching multiple classes I am taking.
13. As a student, I would like to be able to filter available tutors that:
 - a. Had my professors previously
 - b. Are within my budget
 - c. Speak my preferred language
14. As a student, I would like to be able to sort available tutors by rating and price.
15. As a student, I would like to be able to find specific tutors by name.
16. As a student, I would like to be able to easily pay my tutors.
17. As a student, I would like to be able to rate the tutors I have connected with based on their helpfulness and response time so that other students can determine whether they want to be tutored by them.
18. As a tutor, I would like to be able to see a student's rating.
19. As a tutor, I would like to be able to rate the students I have connected with based on their willingness to learn and promptness of payment.
20. As a tutor, I would like to be able to track a student's attendance so that I can give them a proper rating.
21. As a student, I would like to be able to schedule group study sessions with other classmates via google calendar.
22. As a tutor, I would like to be able to quickly access my schedule via google calendar.
23. As a tutor, I would like the option to create group tutoring sessions so that the students can connect as well.
24. As a student, I would like to be able to schedule or join group tutor sessions via google calendar.
25. As a user, I would like to be able to post documents such as practice problems, study guides, notes, or solutions to class material if permitted by my professor.
26. As a user, I would like to be able to report posts that violate Purdue University guidelines. (ex. posting exam questions, homework answers, etc).
27. As a student, I would like to be able to share a tutor's individual profile link with a classmate if I have had a good experience so that my classmate can easily find them.
28. As a student, I would like to be able to access discussion board pages for classes that I am taking.
29. As a user, I would like to be able to post questions on a discussion board for classes I am taking or tutoring for so that I can easily communicate with my classmates and ask questions if needed.

30. As a user, I would like to reply to another user's post in a discussion board so that I can answer their question.
31. As a tutor, I would like to be able to post recommended materials for a course on its discussion board.
32. As a user, I would like to be automatically logged out of my account after a certain amount of time so my account remains secure.
33. *If time allows:* As a student, I would like to be able to tag users in a discussion board post.
34. *If time allows:* As a user, I would like to have all posts filtered out so I don't have to see inappropriate words. (curse words, slurs, etc.).
35. *If time allows:* As a user, I would like to be able to upvote a post on a discussion board.
36. *If time allows:* As a user, I would like to have a tutorial/help page when I log onto the website for the first time that walks me through how to navigate TutorsRUs.

Nonfunctional requirements

Architecture and performance

We plan to implement our application using React JS for the front end and Node JS for the back end and our database will be Firebase. The two ends will be connected, interacting with one another to present and operate the web application. We expect an average response time of 4200 ms / 10000 req based on projects with similar aspects and the use of Node JS. In addition, the render time for React JS is around 16 ms. Our hosting platform of AWS Lambda allows up to 1 million requests/month which will allow for our project to be large-scale.

Usability

The interface will be easy to navigate and will provide a simple user interface for all college students and tutors. As our website combines a plethora of features to create a successful tutoring resource for students and tutors alike, it is incredibly important that our site is aesthetically pleasing and functional so all users can easily navigate to the part of the site they need to. Other websites we have mentioned don't have most of the features we are offering so we aim to make all of our features easy to access and understand. In addition, we are creating one site for both students and tutors with a quick switch between both user types to ensure that no one is inconvenienced when they try to access features that belong to another user classification. Tutors and students will both have similar front-end appearances, but tutors will have access to student information and ratings, whereas students have access to tutor information and ratings. Furthermore, our site should be accessible from all devices and resolutions from various

browsers to guarantee accessibility. Finally, we hope to implement either a tutorial that shows you how to use the website when you first create an account or a help page with instructions on how to navigate the website to guide users throughout the interface.

Security

Security is of utmost importance to TutorsRUs, as we will possess the private information of different users. To ensure that no one on our site will be a scammer, we are implementing a verification system to ensure that tutors are reliable and have the credentials they claim to have. In addition, students will link their payment methods before meeting so tutors are guaranteed their payments. Tutors and students will only be able to access private information about one another once they both connect. To further create a safer environment, we are creating functionality that will automatically take down false information and inappropriate posts once they have been reported a certain number of times. Finally, we plan to integrate authentication tokens so that when a user has the application open and is inactive for an extended period of time, they are automatically logged out, and will have to input their login credentials again in order to access their information. We will implement security throughout the application by utilizing the built-in security features from the platforms we use to deploy our project. For example, Firebase provides security rules to protect secure data from malicious users, and AWS Lambda provides cloud security.

Hosting/Deployment

We will be utilizing AWS Lambda to deploy both our front and back-end development. At times, our front end can be deployed separately from the back end, when testing visual components like the various pages and profiles. However, the co-dependency of the two sides will require concurrent deployment for the application to be fully functional, as the interactions between the two are vital for in-app navigation, customization, as well as information storage.