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Team Sapphire Final Prototype

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Team Bio




			
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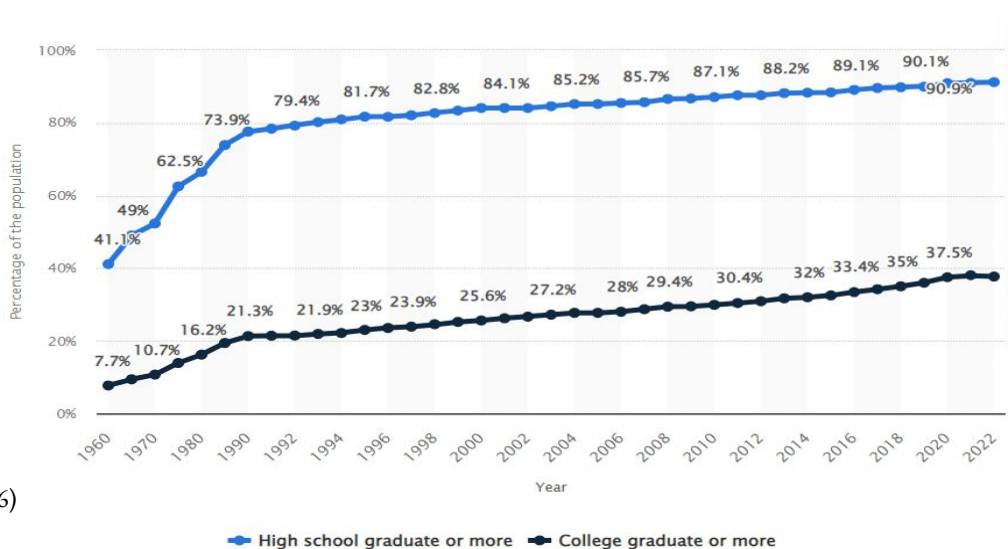
Table of Contents

Problem Characteristics	4, 5	Prototype Planned versus Actual	19, 20
Problem Statement	6	Development Challenges	21
Glossary	7	Recap of Concessions	22
Solution Statement	8	Team Contributions	23
Tools and Components	9, 10	Reflection	24, 25
Database Schema	11	Conclusion	26
Interfaces	12-16	References	27, 28
Timeline	17, 18	Appendix	29

Problem Characteristics

Increased Enrollment

- Between 1965 and 2022, the number of college graduates increased from 7% to 37%



Korhonen, V. (2023, October 6)

Problem Characteristics

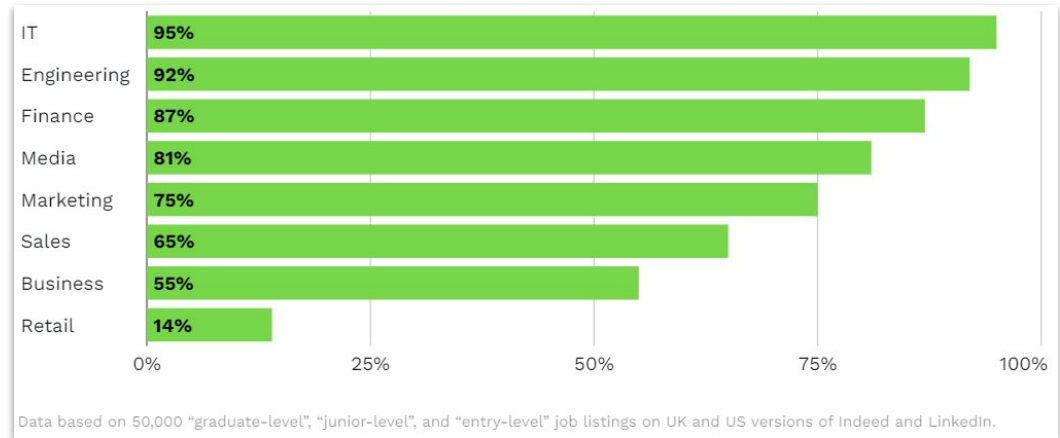
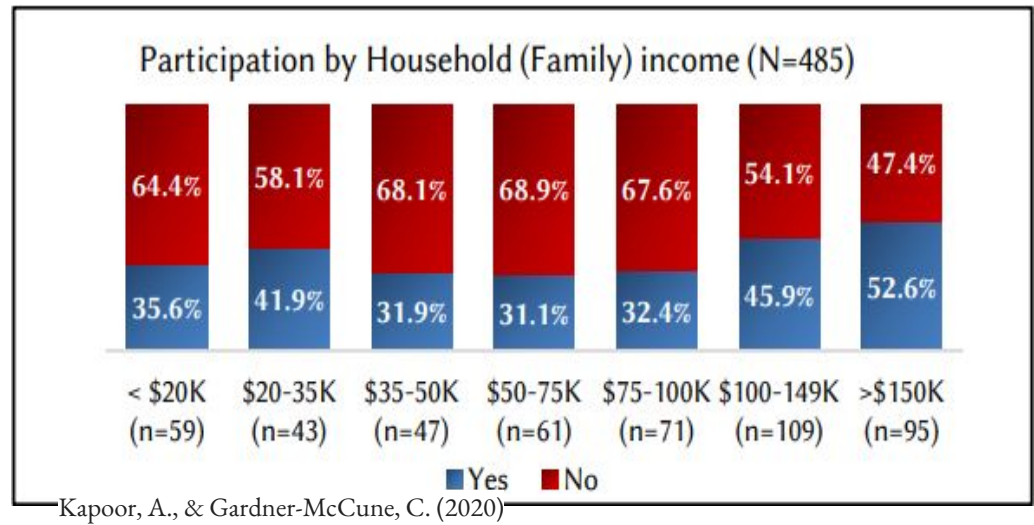
Few Internships

- Internship experience depends on major: 40% of computer science students interned by graduation, compared to 75% of graduating students as a whole

Experience Inflation

- Over 90% of entry level jobs expected at least two years of experience

Search, V., & Salton, H. (2022, January 31)



Problem Statement

College students need experience, but internships and entry-level jobs often require the same type of experience that the student is searching for. Students are stuck with the catch-22 of finding out how to get experience in order to gain experience.

Glossary

Project Launcher- a user who has a project that they are interested in recruiting students to work on

Project Seeker- a user who is interested in using their skills to contribute to a project

Solution Statement

UConnect is a web application that allows college students to reach out to each other and work on projects for experience that they can put on their resumes.

A user acting as a '*Project Launcher*' can make a post describing the project they wish to launch, along with the skills or fields of study they'll need expertise in.

'*Project Seekers*' can browse these posts to find projects they wish to join. They can reach out to launchers.

All users can browse student profiles and view the skills they have tagged their profile with.

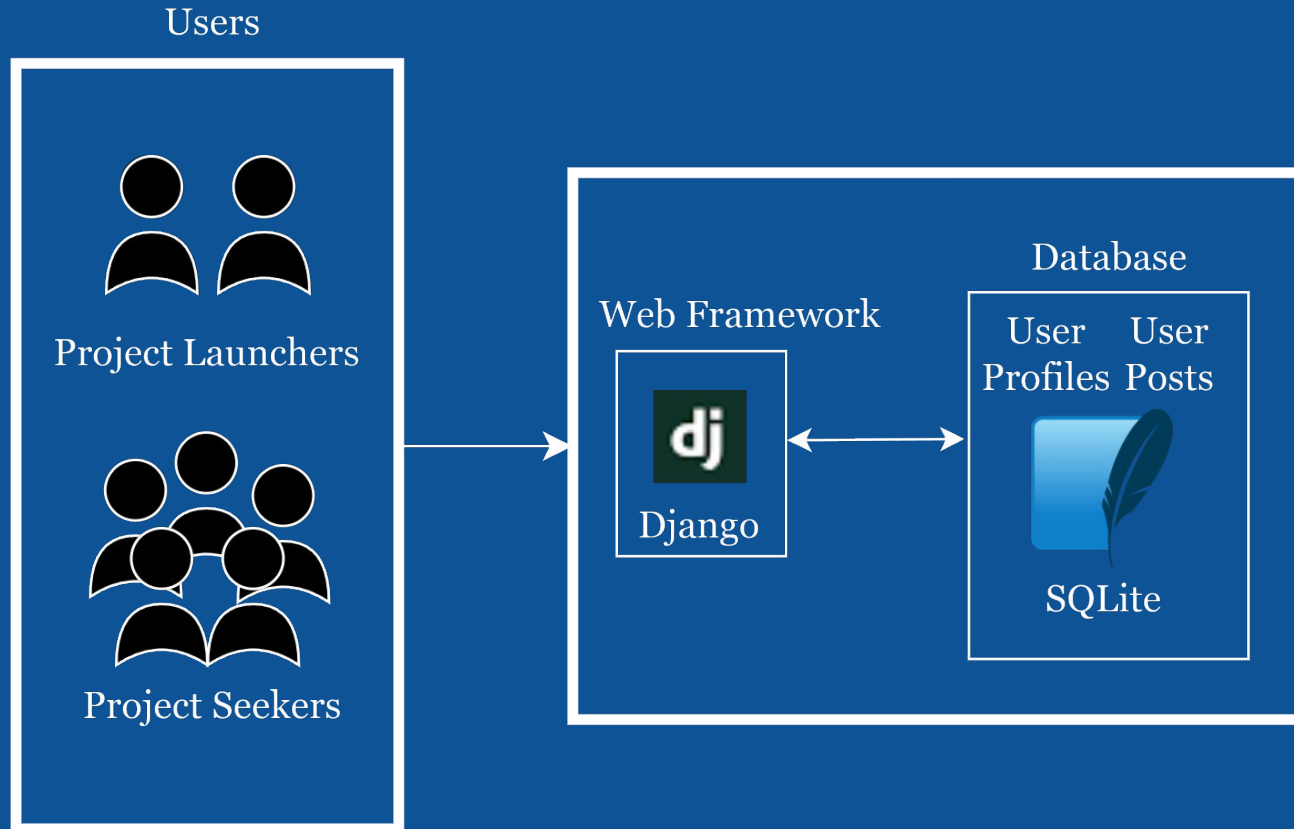
Development Tools

- Integrated Development Environment (IDE) - VSCode
- Version Control- Git with GitHub
- Issue & Project Tracking - Jira

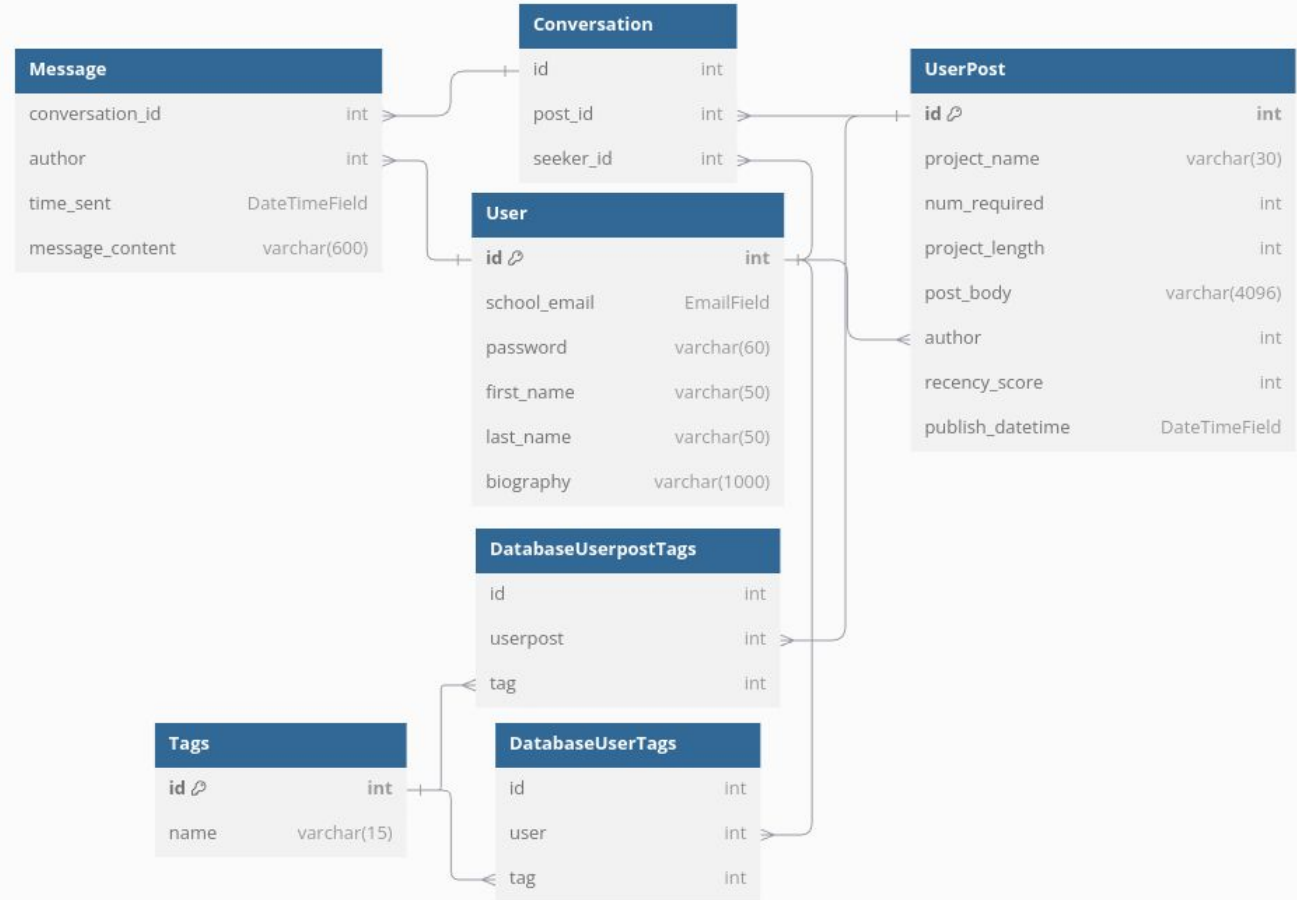
Back-end: Python

Front-end: HTML, CSS

Major Functional Components Diagram



Final Database Schema



Screenshot 1: Sign-up

Here is where you sign up for an account!

School email:

tverr042@odu.edu

Password:

First name:

Tom

Last name:

Verran

Biography:


Hey, I'm Tom. I make pixel art for characters, backgrounds, items--anything you want, I'll do. My passion is in video games, so I'm game for any of that kind of work.

Realistically, that's not where my career's going, so fortunately I do more than just game art. I produce logos, do basic animation, make even flyers, etc. I'm proficient with most styles, but prefer the more minimalist end of things.

Select up to 6 tags.

- ☐ accounting
- ☒ app development
- ☐ biology
- ☐ business admin
- ☐ chemistry
- ☐ cinema
- ☐ compsci
- ☐ cybersecurity
- ☐ earth science
- ☐ economics
- ☐ education
- ☐ engineering
- ☐ graphic design

Screenshot 2: Account

 Home Search Launch Inbox My Account

Here is where you view your account!

Edit Profile

First name:
Tom

Last name:
Verran

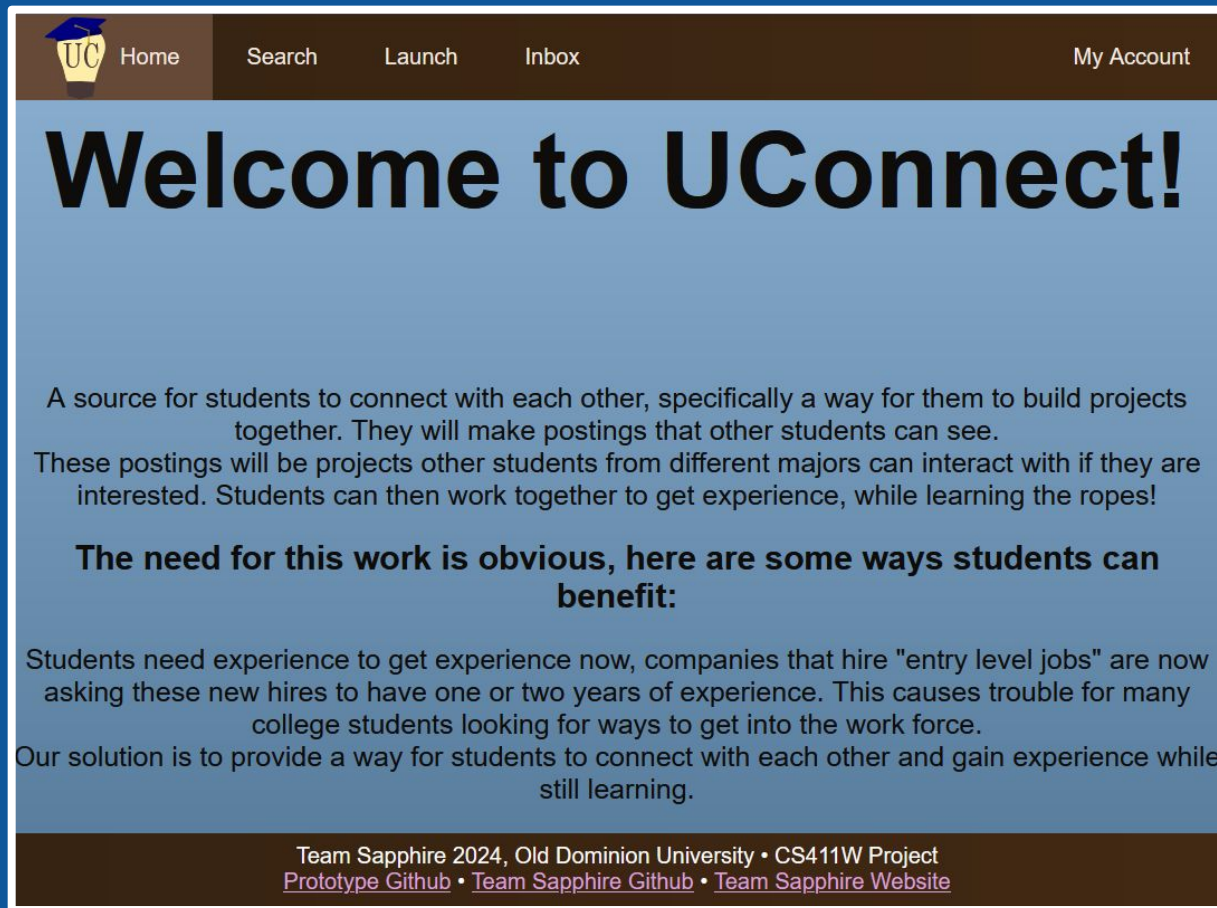
Bio:

Hey, I'm Tom. I make pixel art for characters, backgrounds, items--anything you want, I'll do. My passion is in video games, so I'm game for any of that kind of work.
Realistically, that's not where my career's going, so fortunately I do more than just game art. I produce logos, do basic animation, make event flyers, etc. I'm proficient with most styles, but tend towards a more minimalist direction.


Select User Tags:

- ☐ accounting
- ☐ app development
- ☐ biology
- ☐ business admin
- ☐ chemistry
- ☐ cinema
- ☐ compsci
- ☐ cybersecurity
- ☐ earth science
- ☐ economics

Screenshot 3: Home



Screenshot 4: Post Creation


[Home](#)
[Search](#)
[Launch](#)
[Inbox](#)
[My Account](#)

Here is where you launch a post!

Project Name:

Desired Number of Seekers:

Expected Project Length:

Project Description:

I want to run an experiment on how interactive experiences increase the retention of history lessons for elementary students.
 ODU's Children's Learning & Research Center has granted me permission to perform the experiment with their students in August as long as everything is finalized by July 30th.
 I am looking for 1-2 psychology students, |

Select up to 6 tags:

- ☐ accounting
- ☐ app development
- ☐ biology
- ☐ business admin
- ☐ chemistry
- ☐ cinema
- ☐ compsci
- ☐ cybersecurity
- ☐ earth science
- ☐ economics
- ☒ education
- ☐ engineering
- ☐ english

Screenshot 5: Search

The screenshot shows a web application interface with a dark blue header bar. On the left, there is a navigation menu with a logo (a yellow square with 'UC' and a blue graduation cap) and links for 'Home', 'Search', 'Launch', and 'Inbox'. On the right, there is a 'My Account' link. Below the header, the main content area has a light blue background. At the top of this area, it says 'Search for posts and users!'. Below this, there are two filter buttons: 'Filtering by tags: []' and 'Filtering by text: None'. To the right of these, there is a 'Filter by text:' section with a search input field labeled 'Search by keyword...'. Below this, there are six 'Tag' dropdown menus, each labeled 'Tag 1:' through 'Tag 6:'. Each dropdown menu has a dashed line and a downward arrow. At the bottom of the filter section, there is a 'Search!' button.

UC Home Search Launch Inbox My Account

Search for posts and users!

Filtering by tags: [] Filtering by text: None

Filter by text:
Search by keyword...

Tag 1:
----- v

Tag 2:
----- v

Tag 3:
----- v

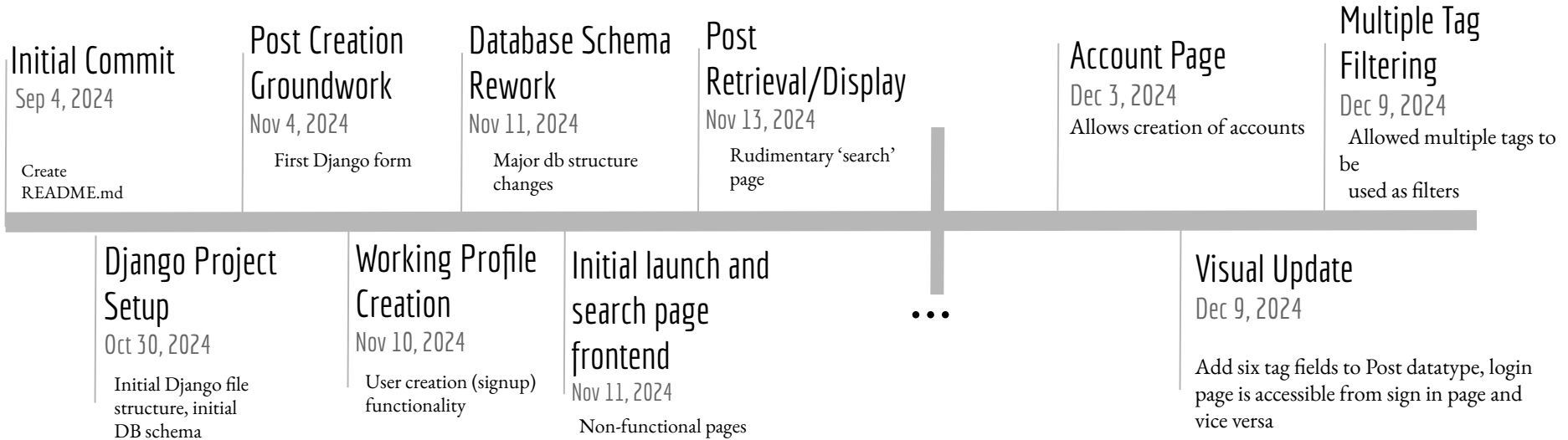
Tag 4:
----- v

Tag 5:
----- v

Tag 6:
----- v

Search!

Development History (Abridged)



Real World Product vs. Prototype

UConnect Feature	RWP	Prototype Planned	Prototype Actual
Create/edit posts	Fully Implemented	Planned	Partially Implemented
Create/edit user profile	Fully Implemented	Planned	(Mostly) Implemented
Tagging system (for user profiles and posts)	Fully Implemented	Planned	Fully Implemented
Search posts (by keyword, by tag, filters)	Fully Implemented	Planned	Partially Implemented
Search profiles (by name, by tag, filters)	Fully Implemented	Planned	Partially Implemented
Leave reviews on user profiles	Fully Implemented	Deprioritized	Unimplemented
View a list of posts by a particular user	Fully Implemented	Planned	Unimplemented

Real World Product vs. Prototype

UConnect Feature	RWP	Prototype Planned	Prototype Actual
Messaging system (via post, via profile)	Fully Implemented	Planned	Unimplemented
Upload files (on posts, through messages)	Fully Implemented	Deprioritized	Unimplemented
Language moderation system (for posts and messages)	Fully Implemented	Deprioritized	Unimplemented
Report posts	Fully Implemented	Deprioritized	Unimplemented
Log in (via school email; 2FA, hashed & salted passwords)	Fully Implemented	Planned (Partial)	Unimplemented
Sample projects	Fully Implemented	Planned	Fully Implemented

Development Challenges

- Effective use/management of a large team
 - Planning, organizing and assigning tasks
- Learning languages and tools not previously used (Django, Python, etc.)
- Communication
- Frontend/Backend Integration
- Front-end challenges
 - Navigation bar
 - Tags
 - Hyperlinks
 - CSS displaying on the server

Recap: Main Changes/Concessions

- No login functionality
 - No OAuth integration
- Simplified search functionality
 - No recency point scoring, no advanced filters (number of seekers, project length)
- No messaging functionality
- Postgresql->SQLite
 - SQLite was the Django default – saw no reason to switch

Team Contributions

Aria: Initial base of Django, ensuring back-end & front-end are properly connected, front-end setup

Anna: User profile setup, addition of tags/script to add them to database, initial implementation of forms

Tygerlily: Initial front-end set up, launch, search, and tag functionality

Caelan: Database schema, launch functionality, search functionality

Caiden: Front end model, sample, and polish. Help on URLs and miscellaneous bugs.

Zara: Database setup, post creation, minor front-end changes

Jasmine: Sample post, attempted messaging, login functionality

If We Could Go Back to Day One...

- **Emphasis on user stories and sprints for organization and guidance** (CL, JW, AF)
- Research development tools and practice using these tools (CL, AF, TG)
- Shorter, more frequent work sessions (CL, TG)
- Focus more on Javascript (AA, CP, TG)
- Better time management (CL, AA, JW, CP, AF, TG)
- **Begin development earlier in the semester** (AF, AA, ZW, CP, TG)
- Communication (ZW)
- Commitment to major functional components (CP)

If We Had More Time...

- Spend more time on UI components (updating font, more text on how things work like a sample post)
- Utilize more Javascript features
- Fix launch page copy/paste issues
- Missing functionality (roughly in order of prioritization):
 - Add expanded/individual post view
 - Add proper login
 - Add messaging
 - More sophisticated search
 - Recency scores, more filters

Conclusion

- Entry-level employers want candidates to be able to apply the skills they claim to possess on resumes.
 - Some skills are better demonstrated in tandem with other, unrelated skills (ex. “good” comedic acting requires writing and directing skills)
- Currently, *UConnect* allows users to create and modify a profile, create a post, and search.
 - Messaging features are to be added.
- *UConnect* has gotten to an alpha stage.

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Appendix

Project Launcher, 5; a user who has a project that they are interested in recruiting students to work on

Project Seeker, 5; a user who is interested in using their skills to contribute to a project

UConnect, 11; a web application that allows college students to reach out to each other and work on projects for experience.