

Lab 1 Version 1 Descriptive Paper

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## 1 Introduction

Uconnect plans to help mitigate the issue of college students not having enough experience to get a job in their major-related field. Veera Korhonen conducted a study in which she tracked the student population percentage increase from 1960 to 2022. In Figure 1, the graph shows graduation rates for both high school and college. In dark blue, the graph shows that more people

than ever have graduated from college with a degree. However, with current trends, a bachelor's degree alone may not be considered enough for an entry-level job.

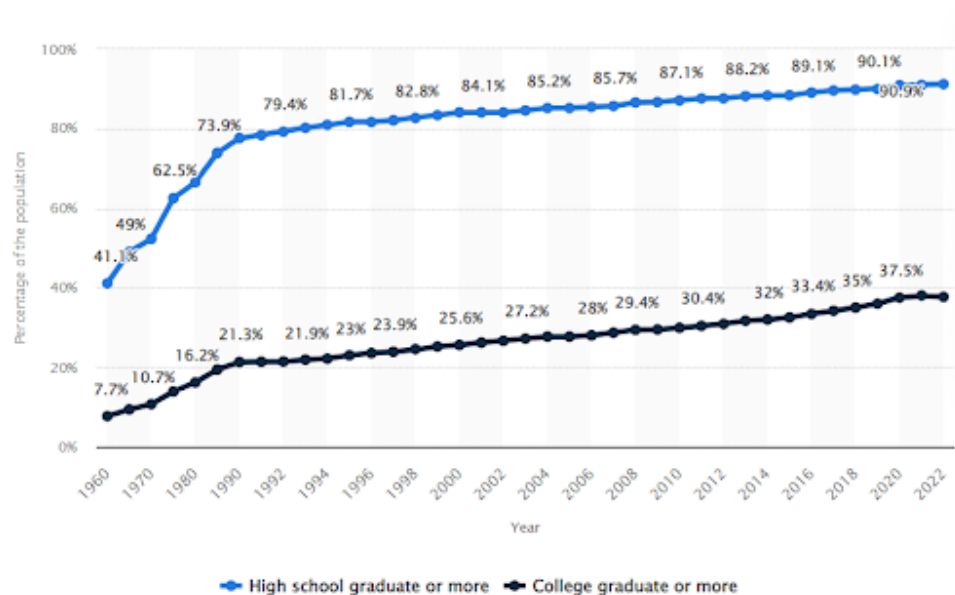


Figure 1: Graph of Enrollment Increase from 1960 - 2022 (Korhonen, 2023).

One of the ways that a student can bridge the experience gap is by getting an internship. This may not be an option for students who have other responsibilities, or a time demanding major. The rate at which students get internships has declined, especially seen in the comparison of two studies that were performed 4 years apart. Specifically for computer science majors, Sarah Zehr found in 2016 that 75% of students had some form of internship experience by graduation, however the study by Kapoor and Gardner-McCune in 2020 highlighted that these numbers are lower as only about 40% had internships by graduation. The distribution of internship participation by household income and gender from the 2020 study is highlighted in Figure 2.

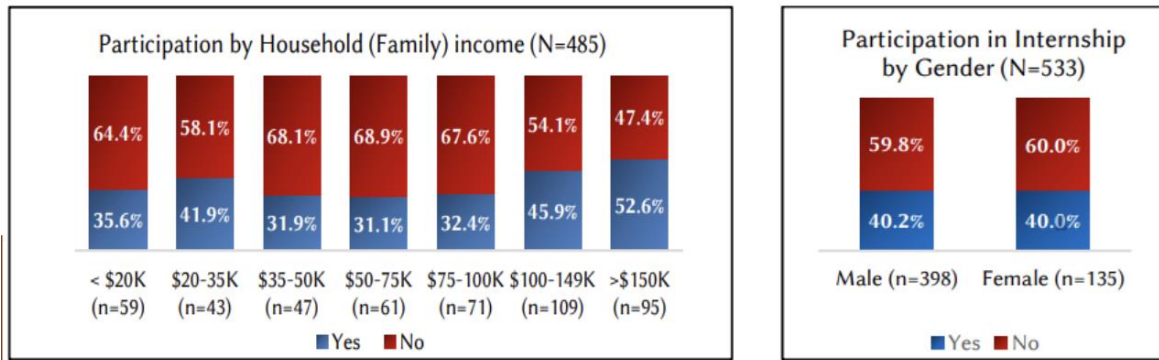


Figure 2: Participation in internships by household income and by gender. (Kapoor & Gardner-McCune, 2020).

The situation with jobs requiring more initial experience for entry level jobs is called experience inflation. Verve Search and Hannah Salton did a study exploring experience inflation for different job fields. It showed that as time went on, employers required more years of relevant work experience for jobs listed as “entry level,” “junior level,” or “graduate level,” as seen in Figure 3.

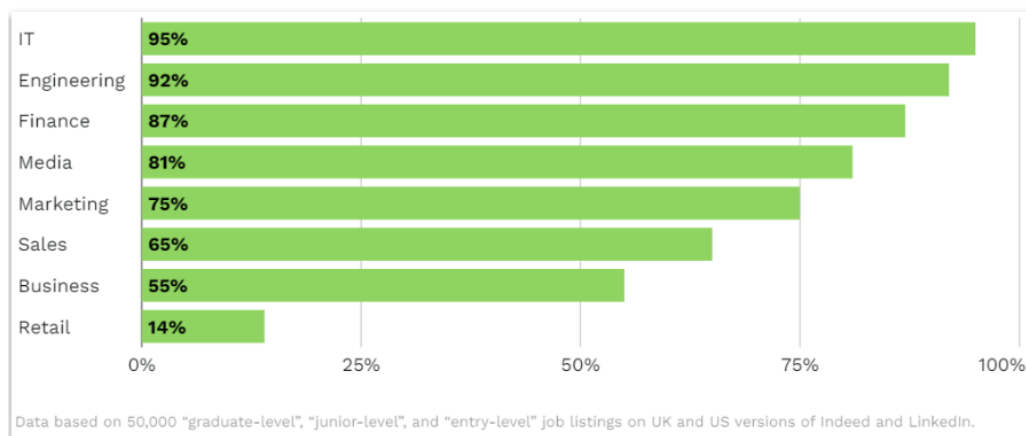
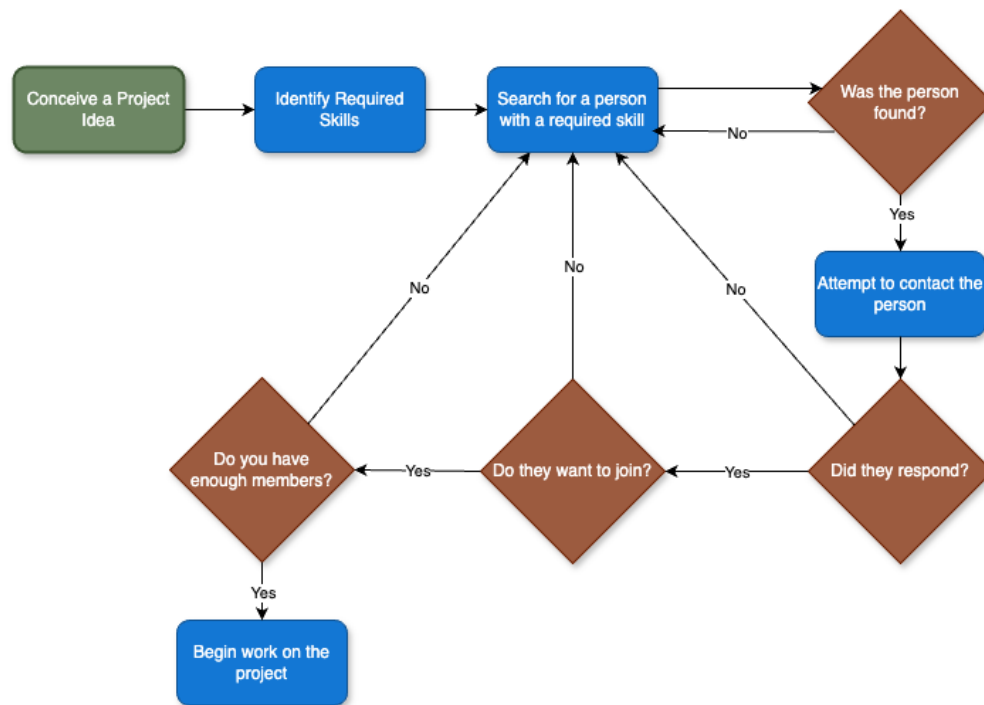


Figure 3: Percentage of jobs, by industry, that required at least two years of experience or more, based on data from LinkedIn and Indeed (Search & Salton, 2022).

UConnect mitigates the problem by providing a platform for college students who are interested in gaining experience and working together on projects. Without UConnect, students who look for other students to work on projects are at a disadvantage, as they must search on multiple different social platforms to have the best chance of finding people. In Figure 4, the process flow chart explains the process students go through to gain experience. The figure shows that students,

that want to start a project, may need to use multiple platforms to find other students who want to work on the project. By needing to search on multiple platforms, the students have an increase of the level of response uncertainty. This further increases difficulty the more members needed for said project.



*Figure 4: Current Process Flow for Project Launchers.*

On the other hand, students who are looking for experience have a similar issue if they want traditional employment, an internship, or to search for other student organized projects. Experience inflation affects the ability for students to obtain jobs, and the decrease in students being in internships means that searching for student-created projects becomes a feasible route as seen in Figure 5. However, there is still the issue without UConnect of needing to search on multiple different platforms for projects and the issue of getting responses.

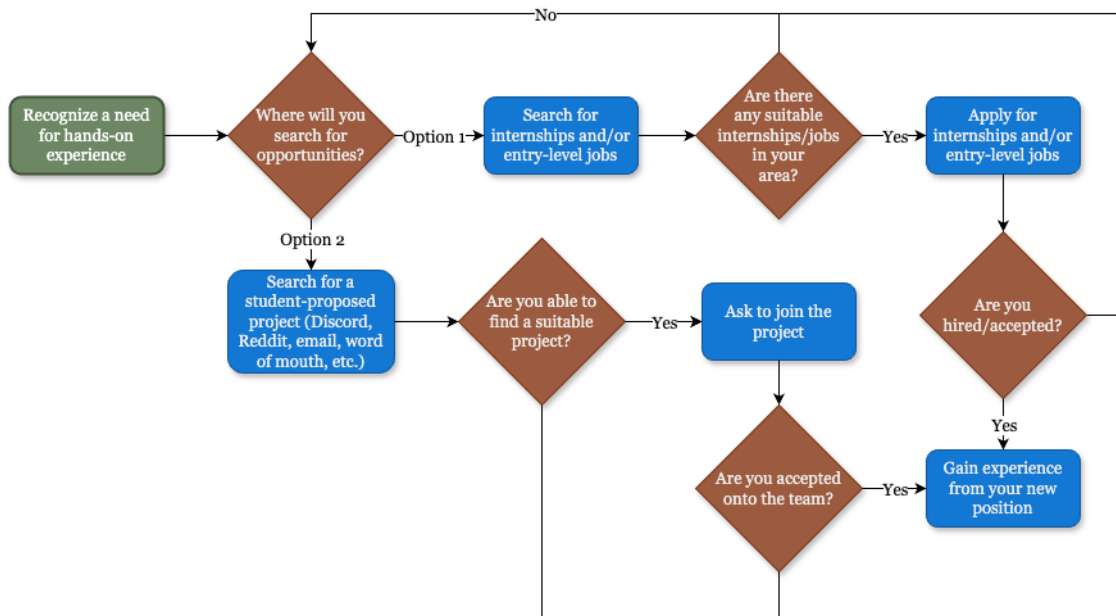
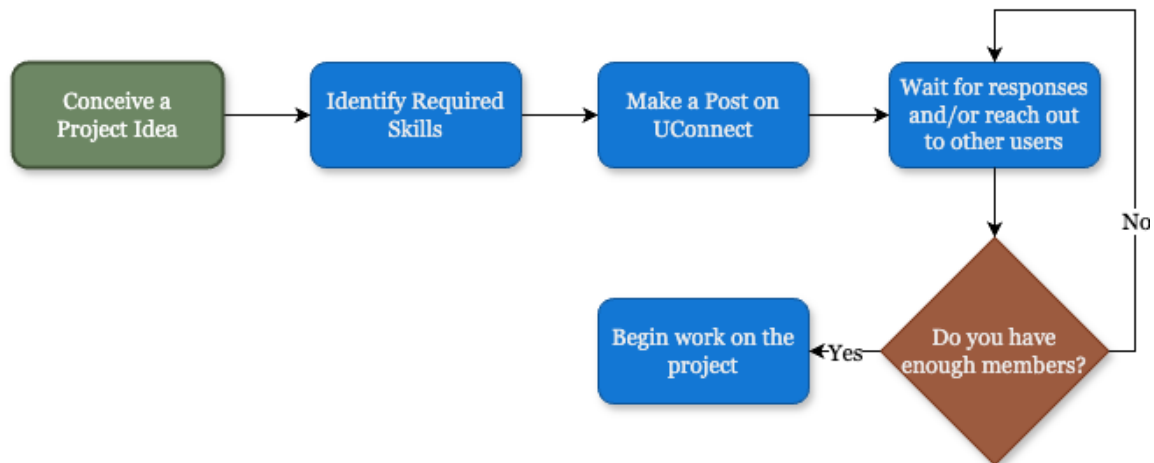


Figure 5: Current Process Flow for Project Seekers.

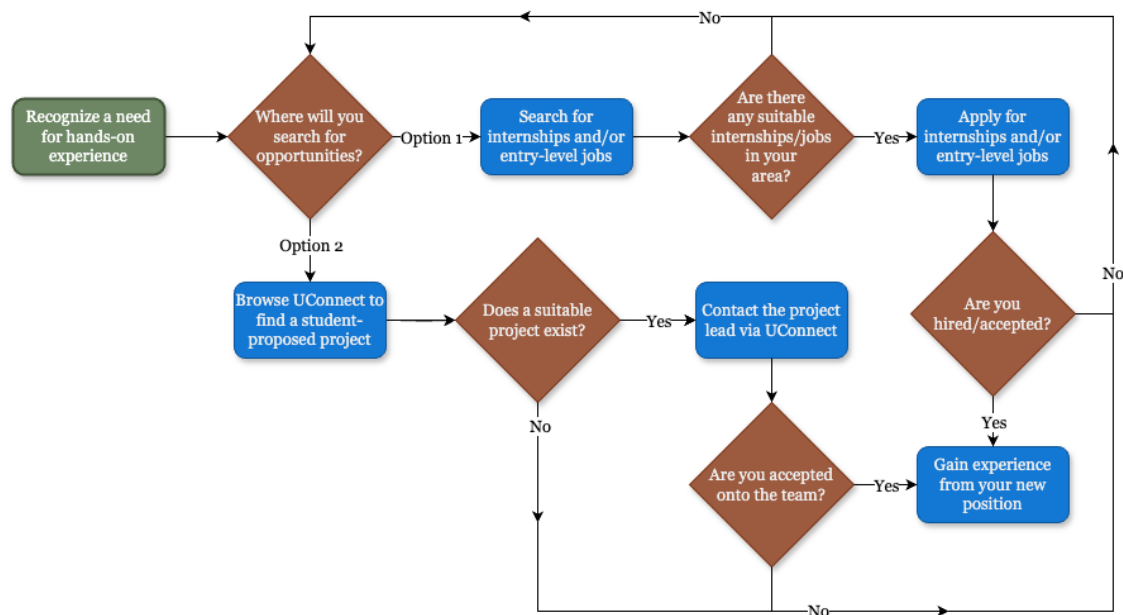
## 2 UConnect Description

UConnect will be a web application designed to enable college students to connect and collaborate on projects, providing them with the experience needed for their resumes. Seen in Figure 6, UConnect, a “Project Launcher” can create a post describing the project they want to start and add skills and fields of study that are relevant to the project.



*Figure 6: Solution Flow of a Project Launcher.*

A project seeker can explore posts on the platform to find projects they are interested in joining and reach out to project launchers directly. Importantly, any user can switch roles at any time, acting as either a project launcher or a project seeker depending on their needs. While students can still pursue traditional employment opportunities, UConnect makes it much easier to discover and join student-created projects by providing a single platform for their search (see Figure 7).



*Figure 7: Solution Flow of a Project Seeker.*



## 2.1 Key Product Features and Capabilities

UConnect's mockup post creation is displayed in Figure 8. The mockup shows some examples of UConnect's features, a major one being the tagging system and to create post content in a text editor. At the top of the mockup, the navigation bar displays some possible web routes that a user can take, such as searching the sites databases, making a project like in the mockup below, viewing a list of projects made by the signed in user, an inbox to view messages, and the user's account.

**UConnect** Search Launch My Projects Inbox Account

**\*Project Name :** Sample Project

**Number seeking :** ☒ Exact : 2 ☐ From  To

**Estimated Length of Project:** ☐ Exact :  ☒ From 2 months To 3 months

**Project Tags :**  Long term Undergraduate Graduate

**\*Seeking Tags :**  psychology? Artist Academic

\*Required to post

12pt v | B / I / U / A | Insert Image | Insert Link

I want to run an experiment on how interactive experiences increase the retention of history lessons for elementary students.

I went to ODU's Children's Learning & Research Center has allowed me to perform my experiment with their students in August as long as everything is finalized by July 30th.

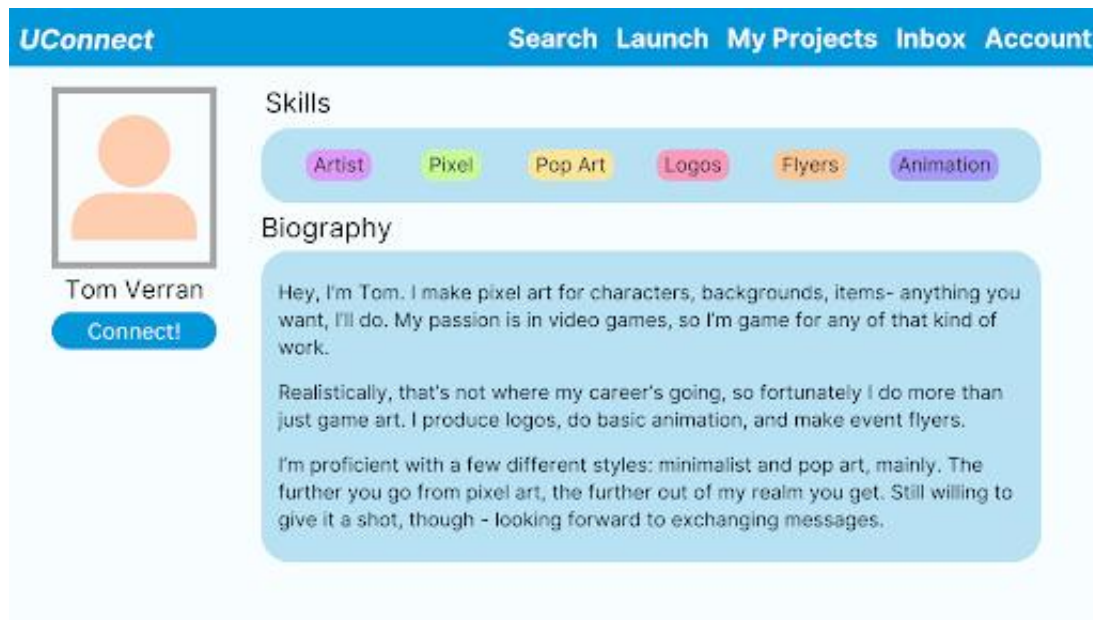
I want a psychology student, ideally versed in child psy

Last save : 3:36:22 PM 3min ago

Save Draft Save and Post

*Figure 8: A Mockup of a Project Launcher Creating a Post on UConnect.*

In Figure 9, a mockup of a user profile is displayed, from the perspective of a different user would see after searching users and choosing to view more information. The account page includes a short biography and skills the account owner tagged and wrote about themselves.



*Figure 9: A Mockup of a User Profile on UConnect.*

From a similar perspective Figure 10: A Mockup of a Post, from the Perspective of a Project Seeker, on UConnect. displays an expanded view of a project post from selecting a project from the search list. The expanded project view also includes information on the right about the project launcher, the tagged skills that would work best with the project, the number of people the project launcher needs for the project, and a link, saying “Connect!”, to send a message to the project launcher through an integrated messaging system.

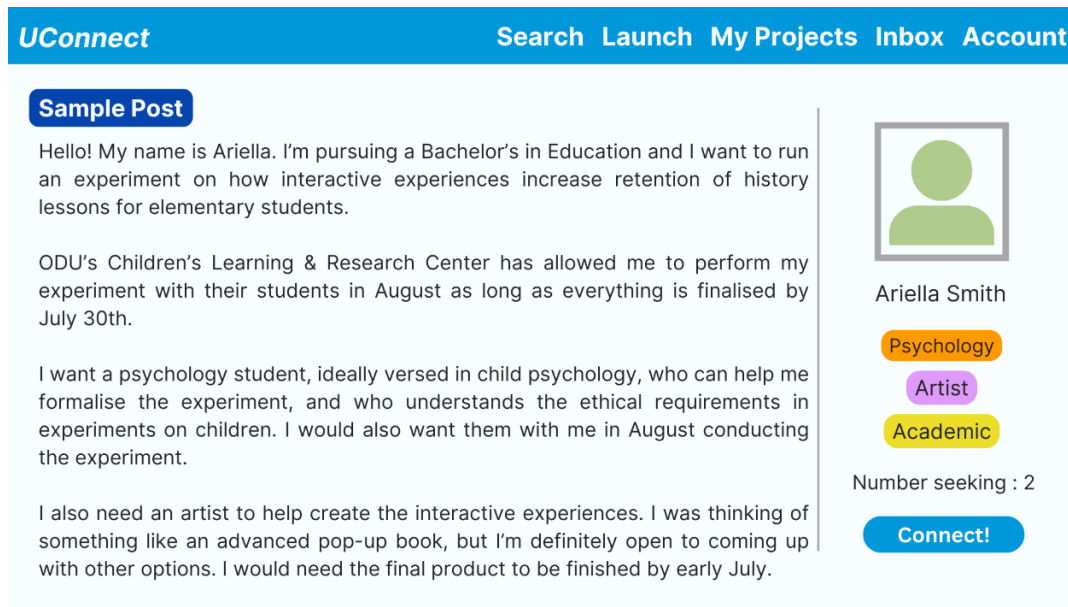


Figure 10: A Mockup of a Post, from the Perspective of a Project Seeker, on UConnect.

UConnect's integrated messaging feature is shown in Figure 11. The message log is shown between a project launcher and a project seeker, and also displays the name of the project that the project seeker started messaging the project launcher from.

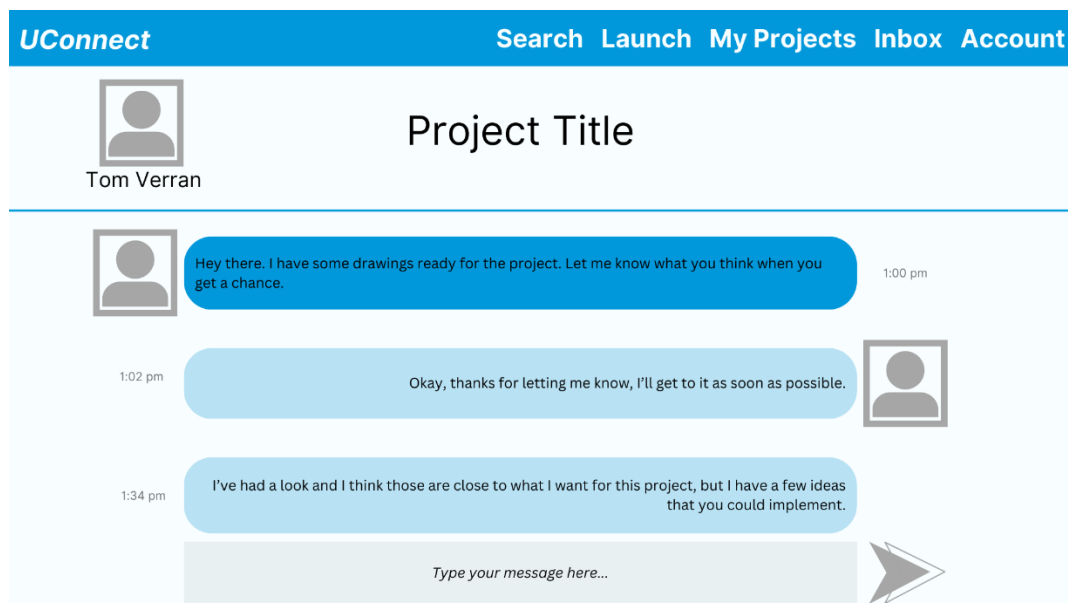
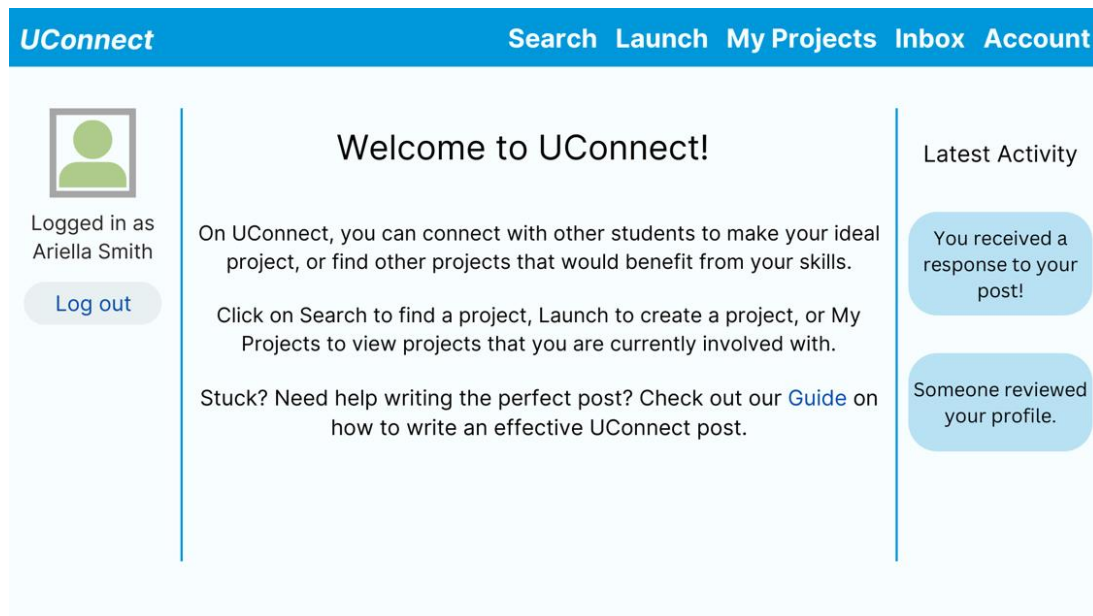


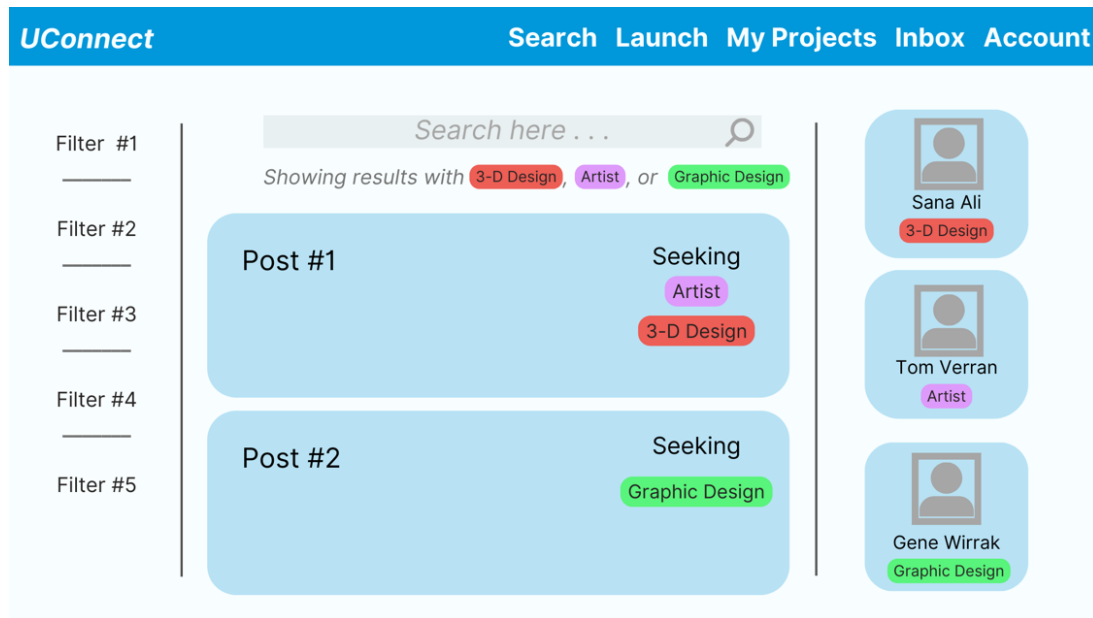
Figure 11: A Mockup of two Users Messaging. The title of the related project is at the top of the message. The recipient is dark blue; the sender is light blue.

In the Figure 12 mockup, when a user logs into UConnect they can see the account they are signed in as, and the accounts latest activity as well.



*Figure 12: A Mockup of the UConnect Homepage after a User has Logged On.*

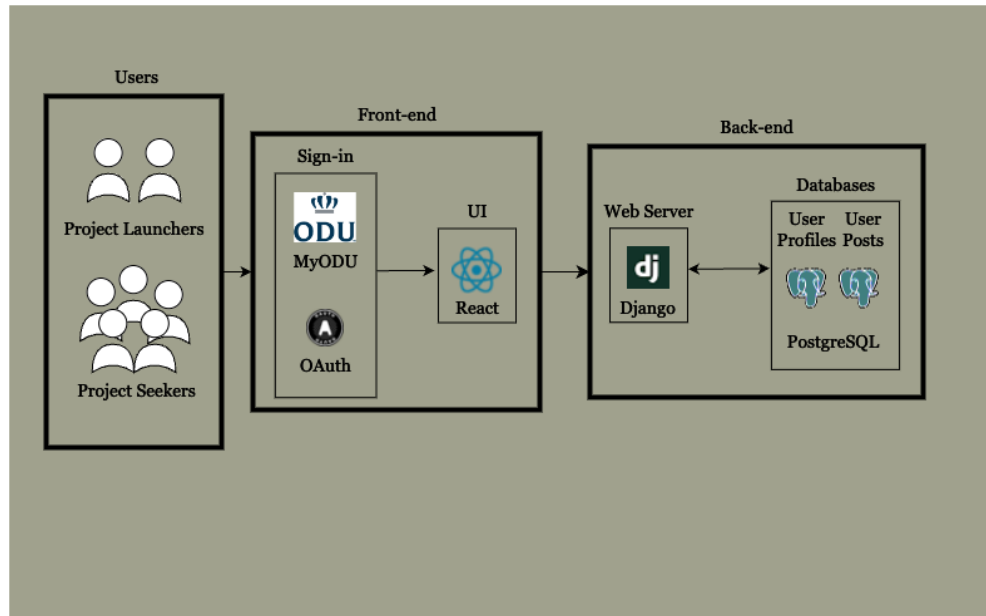
The ability to search through UConnect's database is shown in Figure 13. The mockup search page is shown as if a user made a search for specific tags, so information on users and projects are both included in the results. There is also a list of popular or common filters to narrow down the search available, which would include things like filtering results to users only, projects only, and time frame if applicable.



*Figure 13: A Mockup of UConnect's Search Page, after making a search for the tags "3-D Design", "Artist", and "Graphic Design"*

## 2.2 Major Components (Hardware/Software)

In Figure 14, UConnect's users are students who will be referred to "Project Seekers" and "Project Launchers" depending on the current task the user is doing. UConnect's front-end development will be split into two parts. For signing in and creating accounts, users will be using a school email account for sign up, and OAuth will be used to verify the users for sign in. React will allow the user to interact with the front-end side of UConnect. Back-end web development will be supported by Django, and PostgreSQL will be used for the connected database.



*Figure 14: Major Functional Component Diagram for UConnect*

### 3 Identification of Case Study

UConnect is developed for students who are actively enrolled in a college, university, or another institution of higher education. Students are the primary users as the purpose of UConnect is for students to gain practical experience by working with other students, so that they are more prepared to enter a post-education workforce. UConnect's customers are higher education administrators. The administrators would purchase the use of UConnect for their students, so that they may learn to network, collaborate, and gain experience with other students.

#### **4 Glossary**

Project Launcher: User who has a project they are interested in recruiting students to work on

Project Seeker: User who is interested in using their skills to contribute to a project

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