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# Team Sapphire Feasibility Presentation

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# Team Bio



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# Elevator Pitch

A Bachelor's degree is not enough to qualify for many early-career positions.

But how can one get experience if they aren't hireable due to their lack of experience?

College students are surrounded by other students who want an opportunity to use their skills.

Let's imagine that a film student wants to make a short movie. There are English majors, theatre students, and other students who might enjoy working on it as well.

...But students don't always seek out other students on their own.

The solution? A service that allows college students who want to create a project to meet students who need opportunities to use their skills.

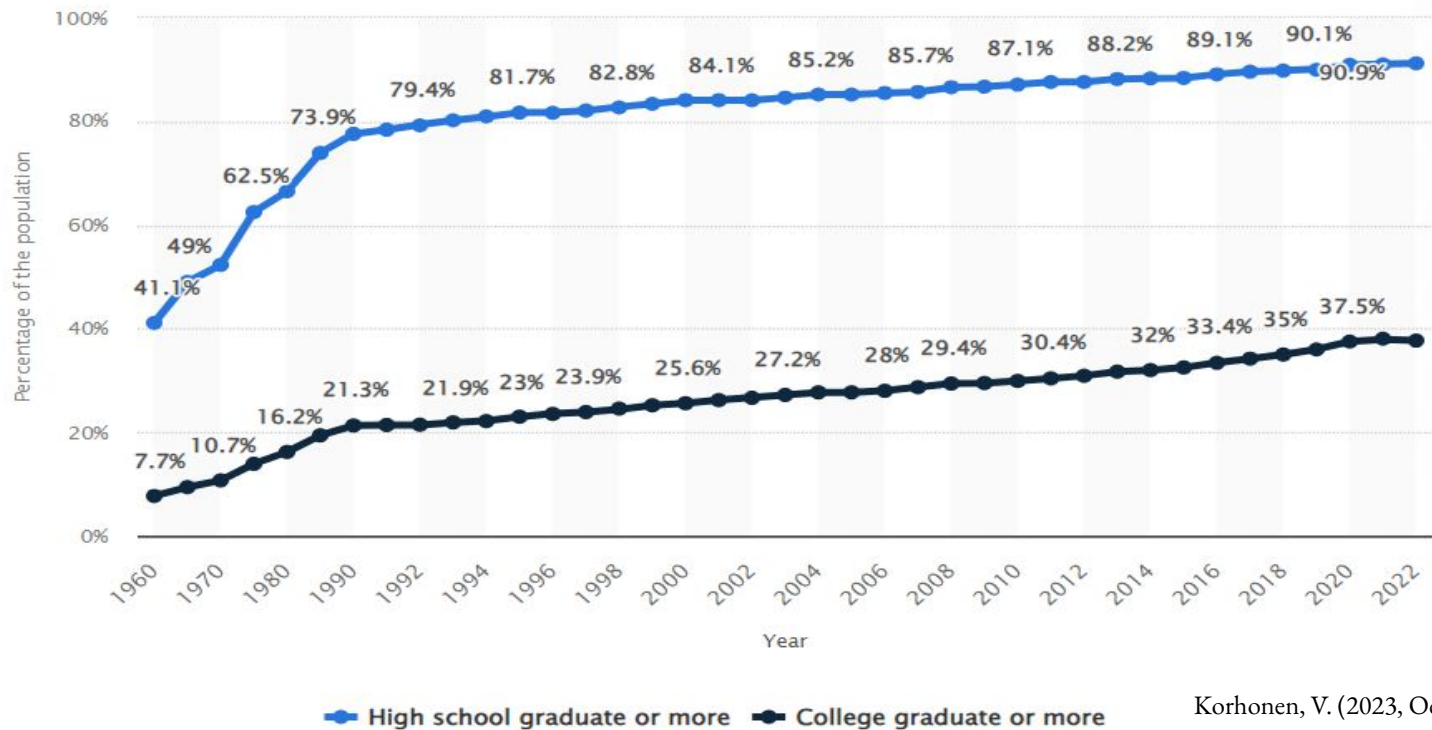
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# Problem Statement

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 get experience.

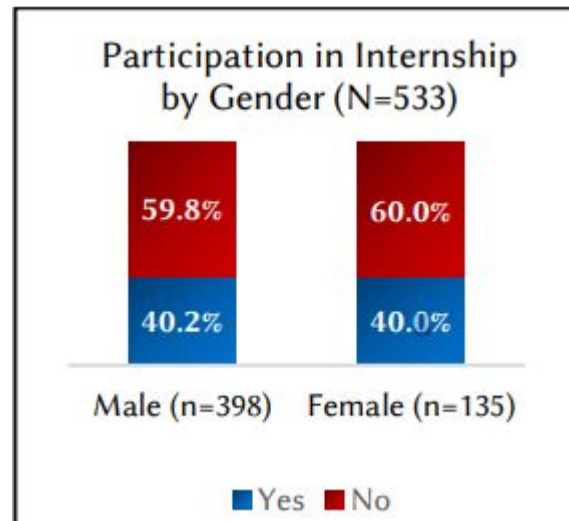
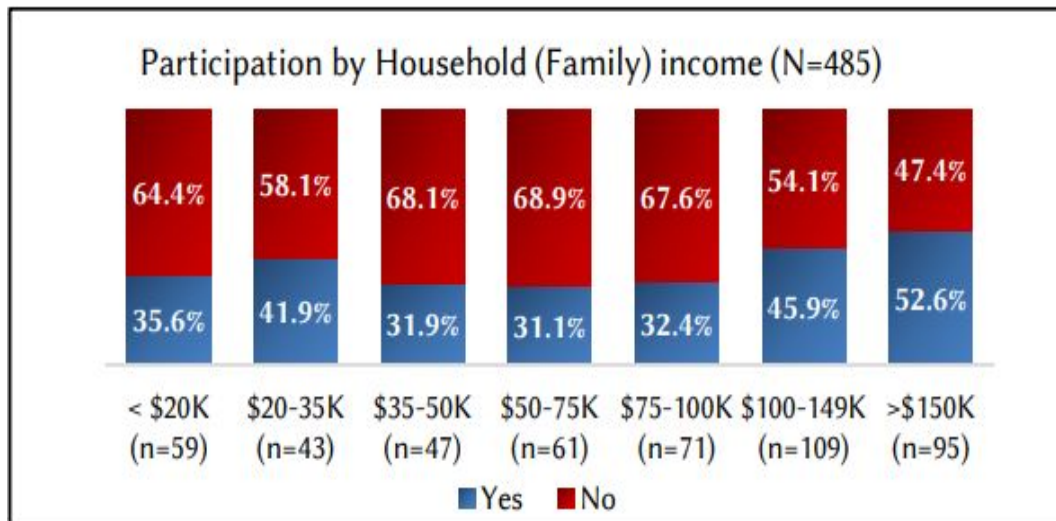
# Problem Characteristics - Increased Enrollment



Korhonen, V. (2023, October 6)

# Problem Characteristics - Few Internships

A study performed in 2016 showed that approximately 75% of students had some form of internship experience by the time they graduated. Sarah Zehr wrote in her dissertation that “the figure is likely higher today”.

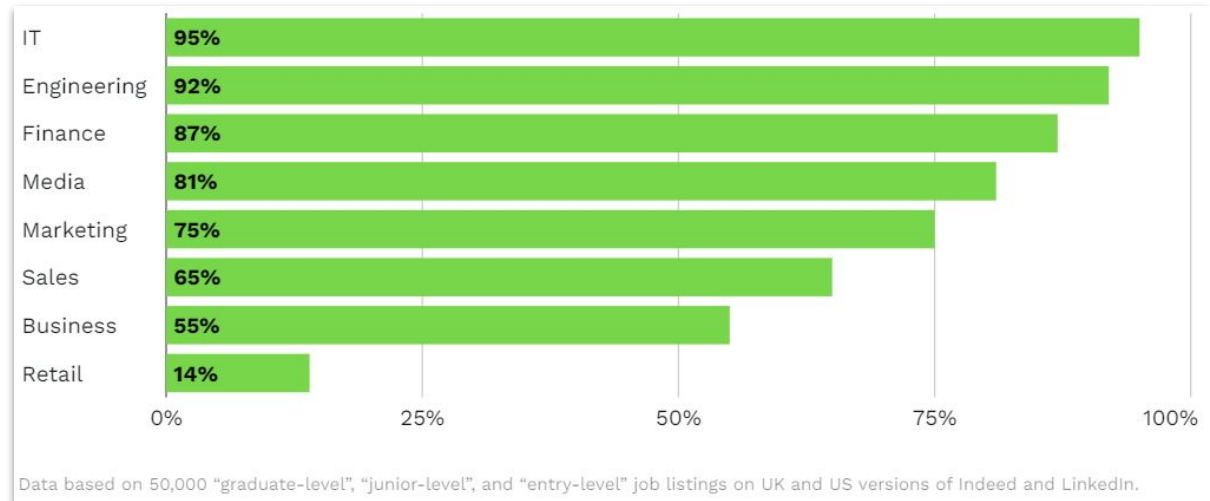


Kapoor, A., & Gardner-McCune, C. (2020)

# Problem Characteristics - Experience Inflation

Two research organizations examined an idea they call “experience inflation” where, as time goes on, more experience is required for entry level jobs.

They found that in the US, entry level jobs are requesting more years of relevant work experience each year. This is for the company to maintain experienced hires.



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

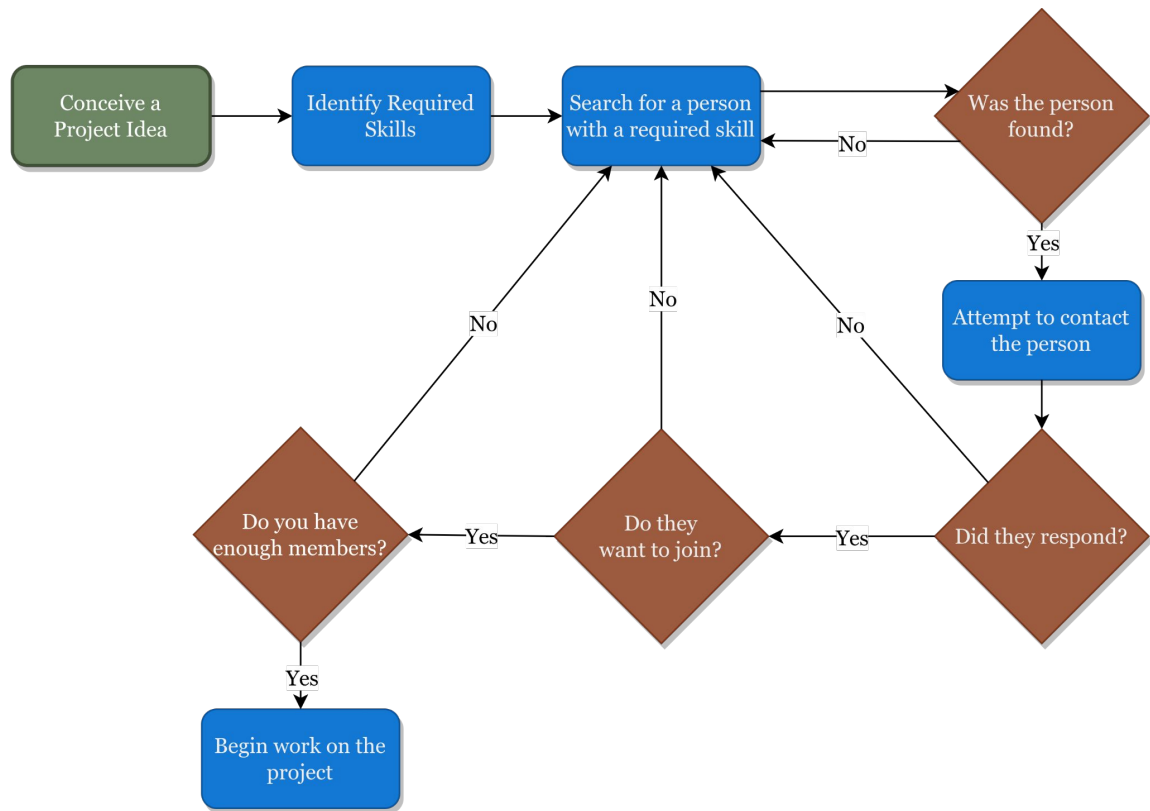


# Glossary

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

# Current Process Flow: Project Launcher



## Key

Start -



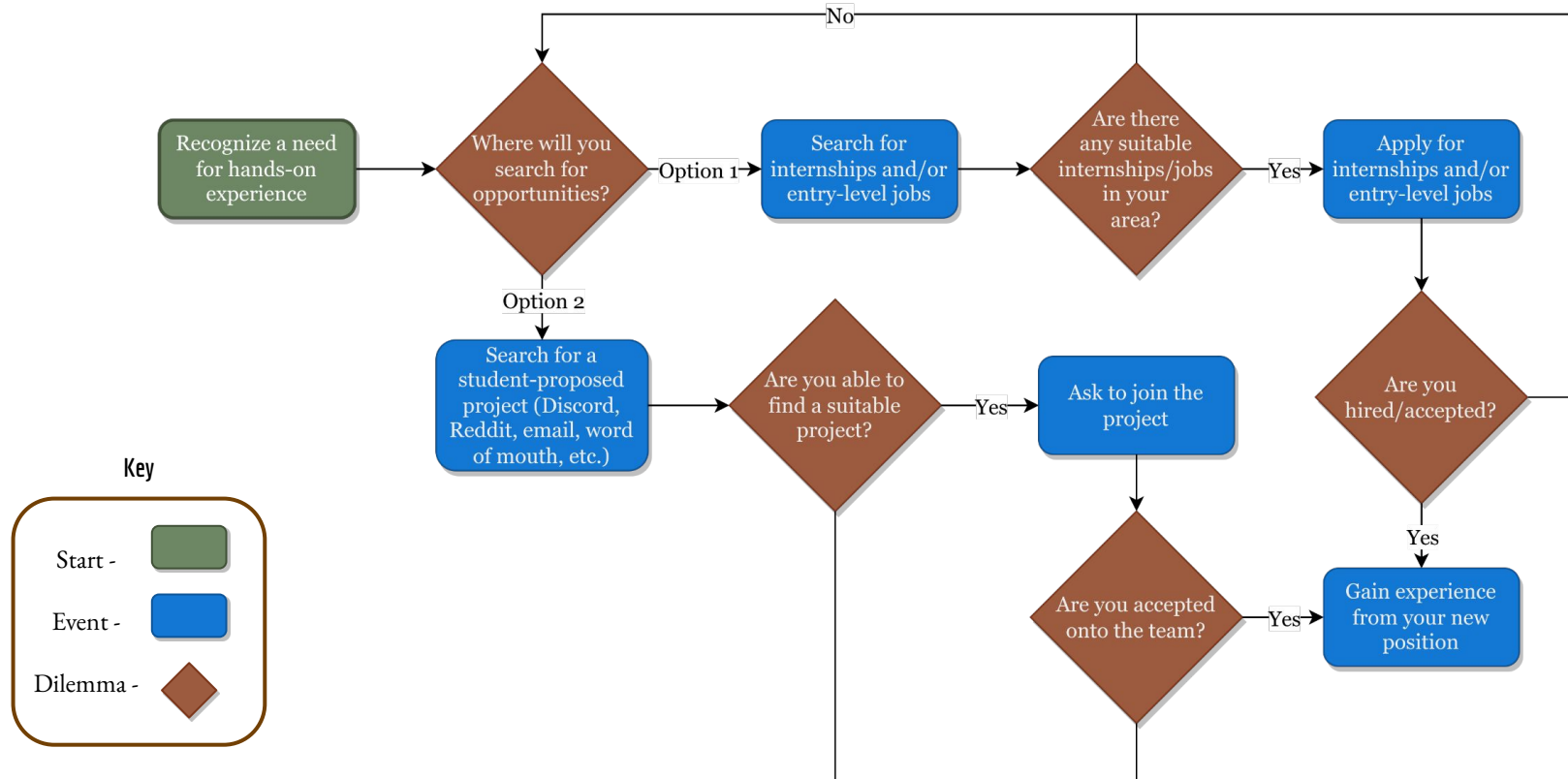
Event -



Dilemma -



# Current Process Flow: Project Seeker



# 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 check skills and reviews, as well as whether that user is open for project invites or not.

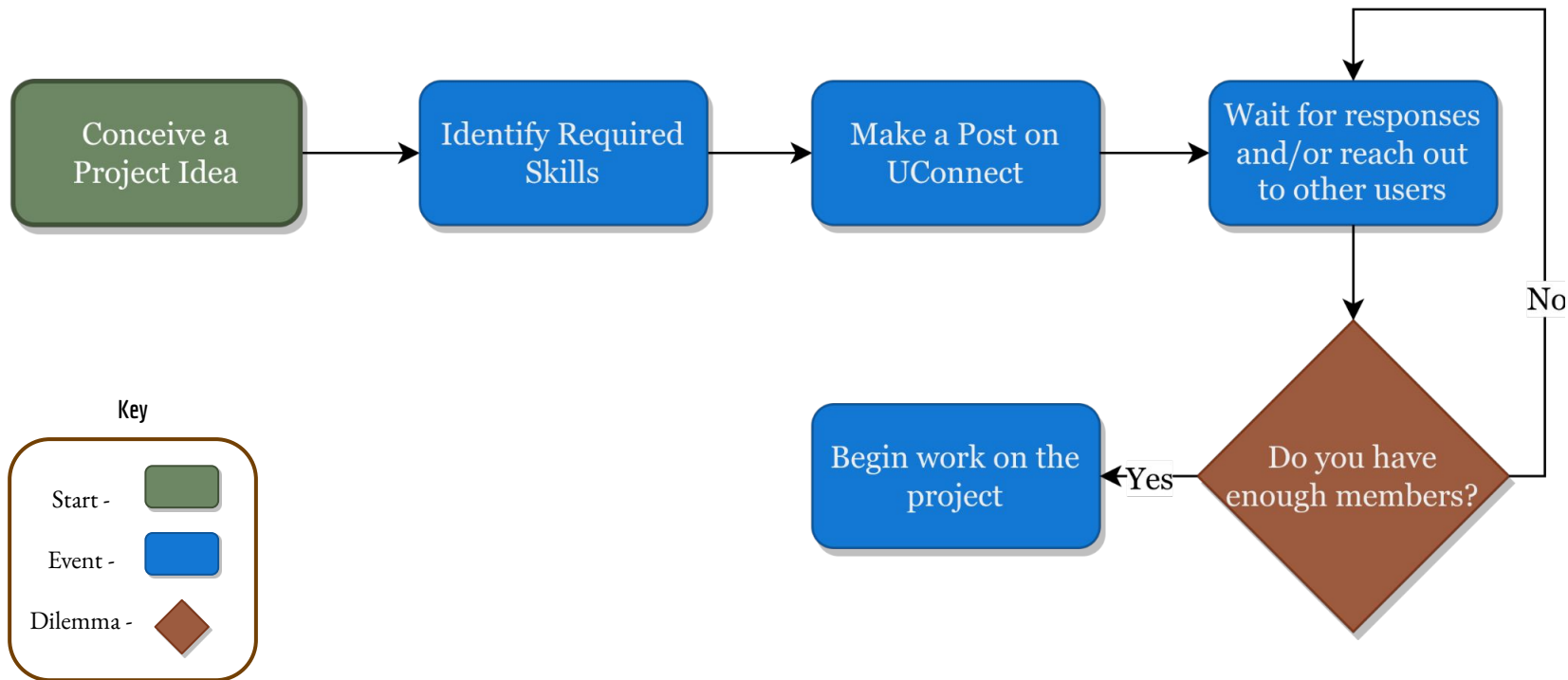
# What It Will Do

- It will allow a Project Launcher to write and tag posts with needed skills and majors.
  - A Project Seeker can browse posts by filter or by searching for keywords.
- It will allow students to browse user profiles.
  - One can see the skills a user possesses and read reviews of their work.

# What It Will Not Do

- It will not allow students to find internships or paid work.
  - It is specifically for students to find each other, not for employers or companies to find students.
- It is not a matchmaker. It does not have an algorithm to match students to each other.
  - It organizes information to allow students to find each other and reach out to each other.

# Solution Process Flow- Project Launcher



**Sample Post**

Hello! My name is Ariella. I'm pursuing a Bachelor's in Education and I want to run an experiment on how interactive experiences increase retention of history lessons for elementary students.

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

I want a psychology student, ideally versed in child psychology, who can help me formalise the experiment, and who understands the ethical requirements in experiments on children. I would also want them with me in August conducting the experiment.

I also need an artist to help create the interactive experiences. I was thinking of something like an advanced pop-up book, but I'm definitely open to coming up with other options. I would need the final product to be finished by early July.



Ariella Smith

Psychology

Artist

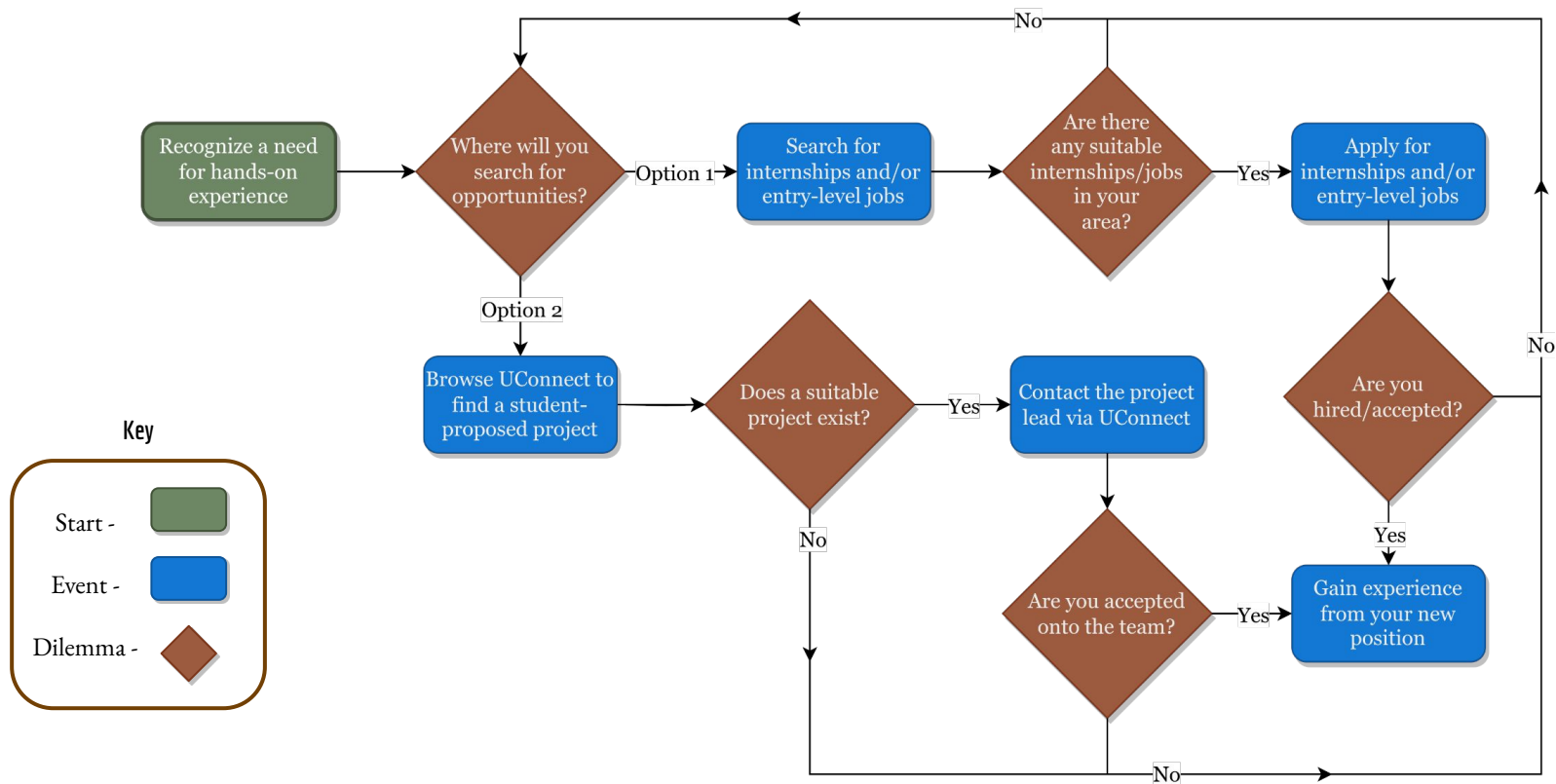
Academic

Number seeking : 2

Sample  
Post  
(mockup)



# Solution Process Flow- Project Seeker



# Search Page (mockup)

UConnect

Search

Launch

My Projects

Account

Filter #1

Filter #2

Filter #3

Filter #4

Filter #5

Search here ...

Showing results with 3-D Design, Artist, or Graphic Design

Post #1

Seeking

Artist

3-D Design

Post #2

Seeking

Graphic Design

Sana Ali

3-D Design

Tom Verran

Artist

Gene Wirrak

Graphic Design

Spring 2024

CS 410 - Feasibility Presentation

Team Sapphire

# Competition Background



**Fiverr:** Freelance work platform; focus on solo projects, advertisement based.



**Upwork:** Freelance work platform; focus on team-based work.



**GroupMe:** Group messaging platform; students can join university-specific group chats.

# Competition Matrix

Feature	UConnect	Fiverr	Upwork	GroupMe
<b>Student-oriented</b>	✓			partial
<b>Early experience-oriented</b>	✓			
School-Exclusive Connections	✓			partial
For Teams	✓	partial	✓	✓
Integrated Messaging	✓	✓	✓	✓
Good for larger projects	✓		✓	✓
Good for smaller projects	✓	✓		✓
Project Searching	✓	✓	✓	
Project Posting	✓	✓	✓	

# Development Tools

- Integrated Development Environment (IDE) - VSCode
- Version Control- Git with GitHub
- Continuous Integration (CI) and Continuous Deployment (CD) - Github Actions & Workflows

Back-end: Python

Front-end: HTML, CSS, JavaScript

Testing Framework: Pytest

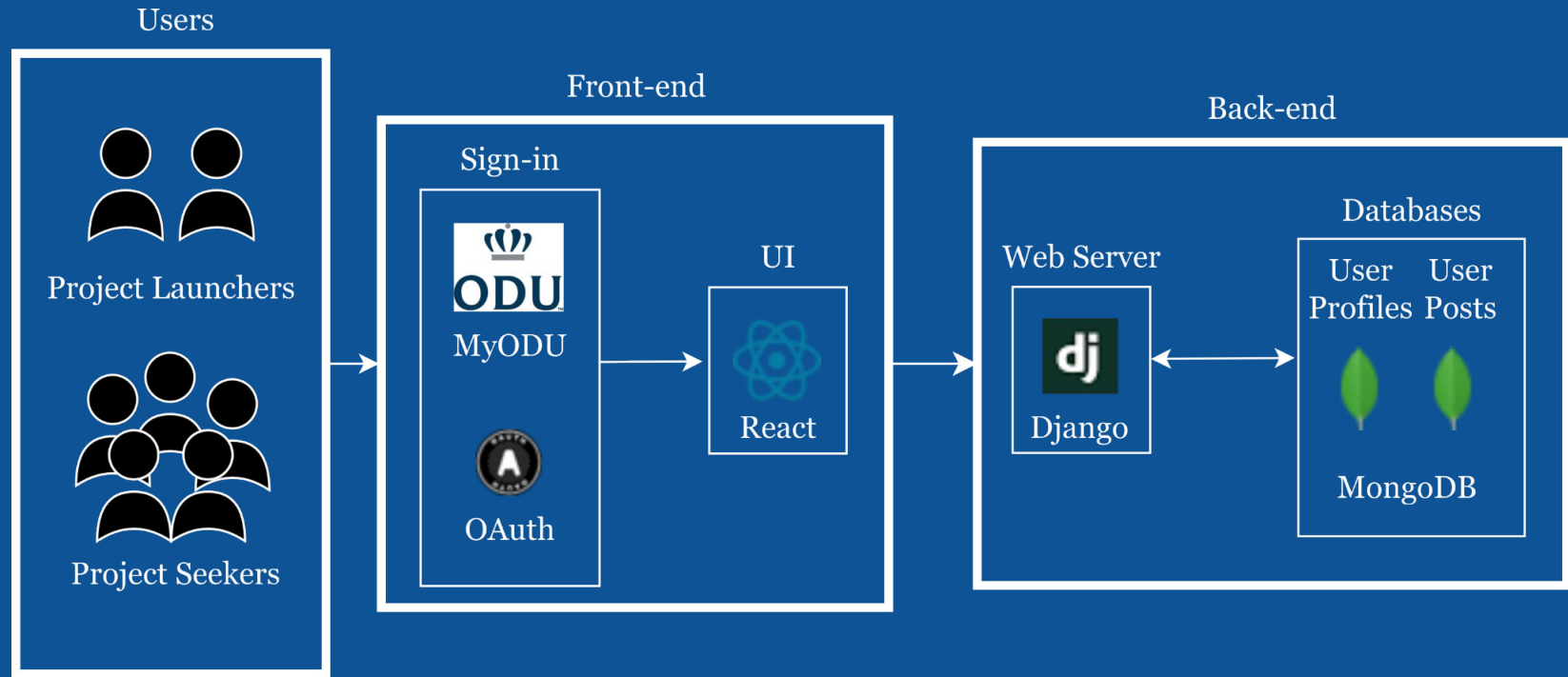
Documentation: Pydoc

# Major Functional Components

UConnect is a web-based application:

- Django for *web development*
- MongoDB for *databases*
- OAuth for *user authentication*

# Major Functional Components Diagram



# User Risks

## Risks:

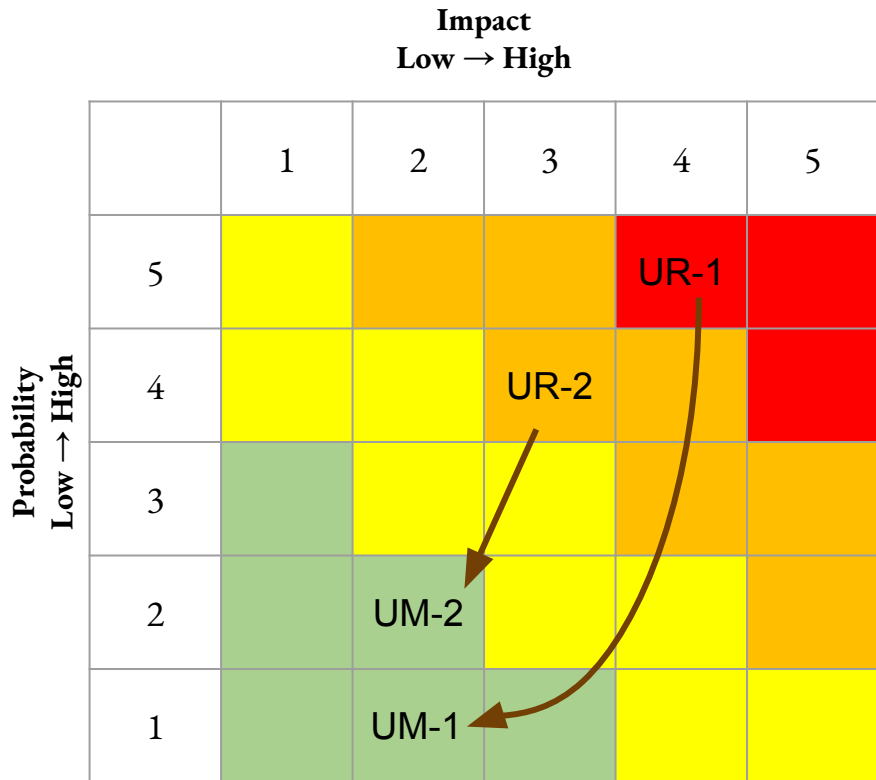
UR-1: No projects exist

UR-2: Projects are unappealing

## Mitigation:

UM-1: Attach to online systems (Canvas),  
recommend use in classes

UM-2: Add sample projects, recruit  
student organizations to add projects,  
recommend use in classes





# User Risks

Impact  
Low → High

	1	2	3	4	5
5					
4			UR-3		
3				UR-4	
2		UM-3	UM-4		
1					

Probability  
Low → High

## Risks:

UR-3: Abandoned post

UR-4: Harmful messages from users

## Mitigation:

UM-3: Auto-send message to user after set amount of time has passed; auto-remove with no response or immediately after a negative response

UM-4: Implement a moderation system, report feature, and word filter

# Technical Risks

## Risks:

TR-1: Loss of project data (post doesn't save)

TR-2: Database corruption

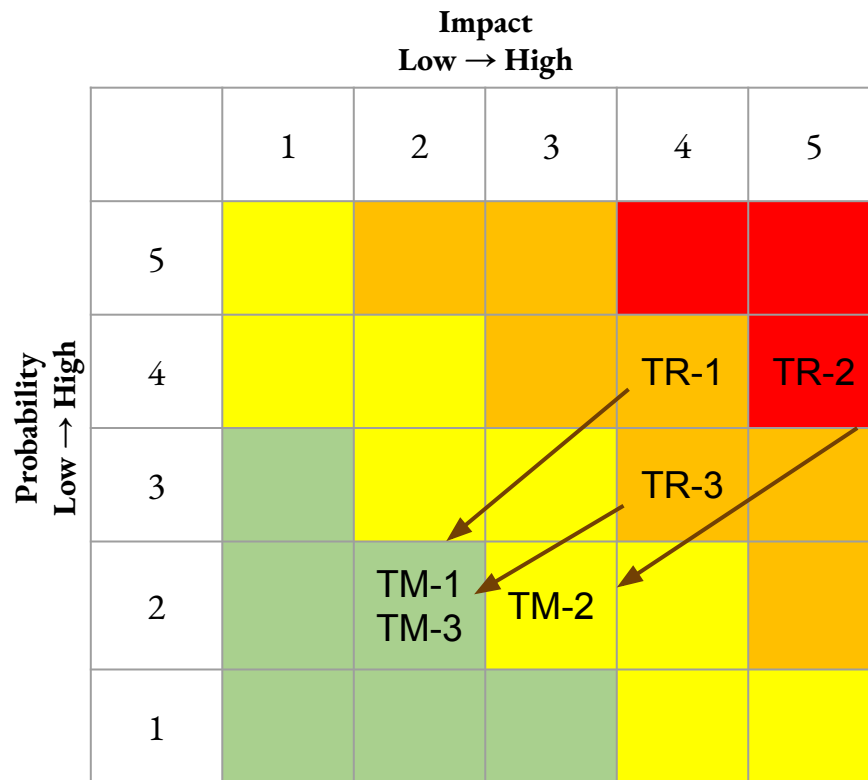
TR-3: Searches yield inconsistent results

## Mitigation:

TM-1: Have backups of project data;  
pop-up

TM-2: Validate and sanitize all user input

TM-3: Test searching functions with  
datasets; filters and related search  
functions



# Security Risks

Impact  
Low → High

		1	2	3	4	5
5						
4				SR-1 SR-2		
3						
2		SM-1				
1				SM-2		

Probability  
Low → High

## Risks:

SR-1: User is not enrolled in school

SR-2: Unauthorized access to student accounts

## Mitigation:

SM-1: Require verification through school email (.edu email)

SM-2: Hash and salt passwords, utilize two-factor authentication

# Security Risks

## Risks:

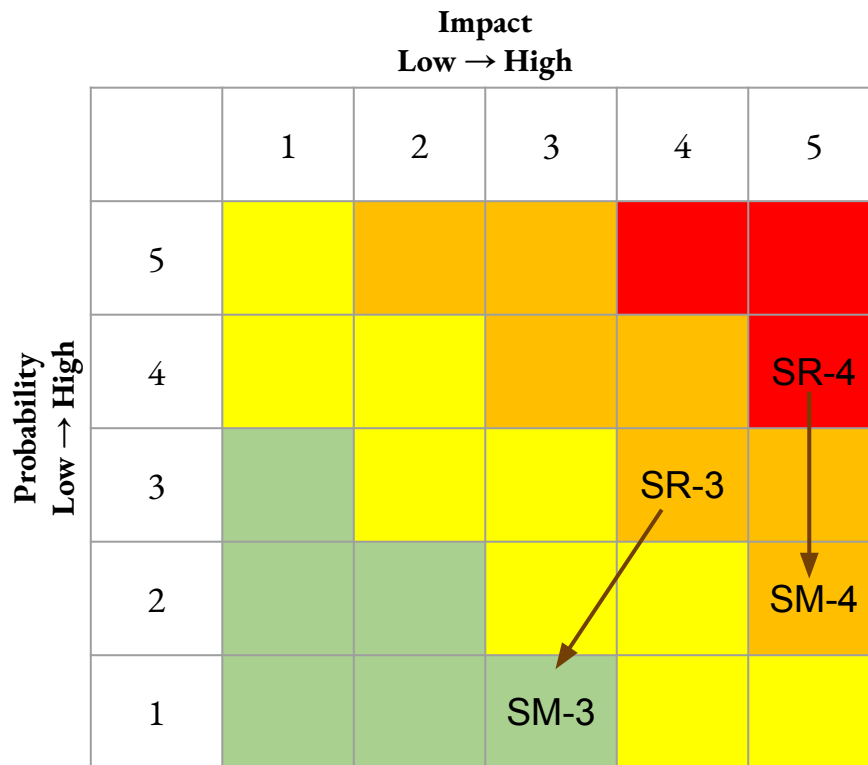
SR-3: Malicious files associated with project

SR-4: Malicious link is shared

## Mitigation:

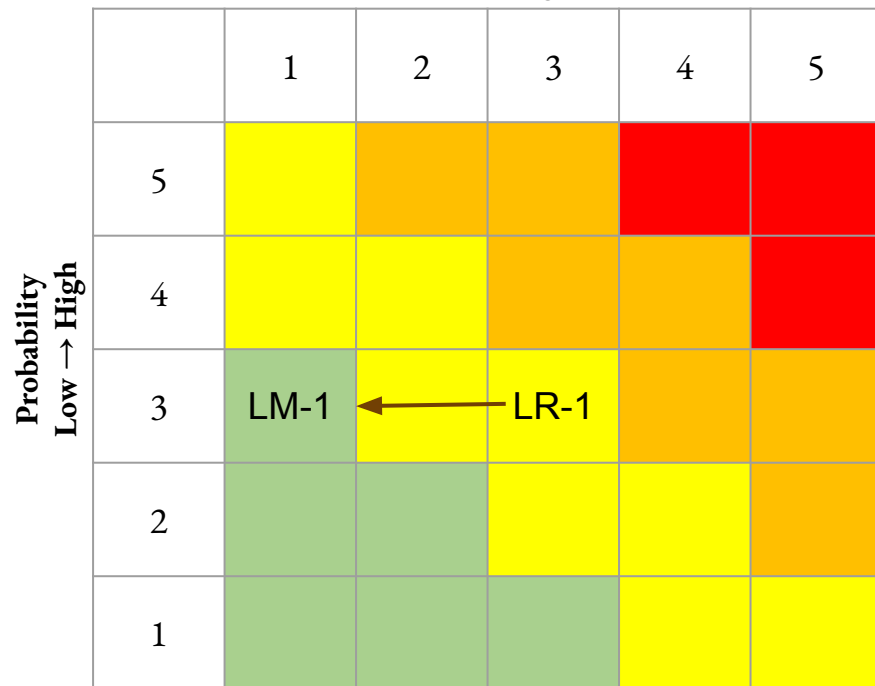
SM-3: Scan files for viruses and malware before accepting, restrict file types

SM-4: Warn users that a link leads to a third-party website



# Legal Risks

Impact  
Low → High



## Risks:

LR-1: Academic integrity violations

## Mitigation:

LM-1: Explicitly state in the Terms of Service; ban violating accounts

# 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)
- *UConnect* provides students with a platform to post and search for projects to create experience before applying to the workforce.
  - The use of *UConnect* will help students develop necessary social skills.

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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.