

CSC425 Deliverable 2: User Research & Problem Definition Submission Template

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Target User Group

Computer Science Undergraduates

Primarily sophomore and junior students seeking early career exposure through short-term, observational experiences in the tech industry.

Problem Description

Computer science students often face challenges accessing job shadowing opportunities that provide insight into real-world tech roles. Unlike internships, which are competitive and time-intensive, job shadowing is meant to be brief and exploratory—but few tech companies offer structured programs. Students lack clear pathways to connect with professionals, especially in specialized fields like cybersecurity, data science, or DevOps. This gap limits their ability to make informed career decisions, build networks, and understand workplace dynamics.

Evidence of the Problem

- “I want to see what a day in the life of a software engineer looks like, but I have no idea how to find someone willing to let me shadow.” — anonymous student interview
- A 2024 report from Handshake shows that only 12% of surveyed tech employers offer formal job shadowing programs.
- According to the National Association of Colleges and Employers (2023), students who participate in early career exposure programs are 35% more likely to secure internships and full-time roles post-graduation.

“How Might We” Statement

How might we create accessible, tech-focused job shadowing opportunities that connect computer science students with professionals in diverse roles across the industry?

User Persona

Name: Maya Chen

Age: 20

Occupation: Full-time computer science student

Location: Lexington, KY

Goals: Explore different tech career paths before choosing a specialization

Frustrations: Few tech companies offer shadowing, hard to find professionals willing to host, unsure how to reach out

Technology Comfort Level: High (proficient in Python, Java, GitHub, and collaborative coding platforms)

Ethical Lens Applied

Principle: Professional Development & Equal Opportunity

- **Application:** The lack of accessible job shadowing violates the principle of equal opportunity by limiting students’ ability to explore careers and build networks based on their socioeconomic or geographic constraints.
- **Stakeholders Impacted:** Computer science students, university career centers, tech professionals, hiring managers
- **Professional Standard:** Aligns with ACM Code of Ethics 1.2: “Avoid harm.” and 1.4: “Be fair and take action not to discriminate.”