



Project X: Problem Statement

Human Computer Interaction (CS261)

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Student Marketplace for Academic & Research Projects - Project X: Problem Statement

Context

Every semester, several students from universities like NUST invest their time and university resources in completing their capstones, course assignments, design projects, and even mini-research studies. However, once graded, most of this work goes into personal drives or maybe into some departmental repository, never to be again referred to or iterated. Meanwhile, the new cohort suffers by looking for good references, not to mention the budding entrepreneurs who could launch their ideas yet have nowhere to showcase them. Currently available options-freelance sites (like Upwork) and general e-commerce platforms-are actually not suited to the academic model: they do not have stringent project categorization, peer-review cues, domain-specific search filters, or supportive learning artifacts: documentation, reports, source codes. Thus, a useful segment of the knowledge capital remains stuck while students are denied the possibility of earning income and professional visibility.

Main Problem

There is no single, trusted market for the exchange, discovery, and reuse of student-built academic and technical projects. This manifests itself in four related pain points:

1. **Student Output Invisibility** - Completed projects are all "lost" after submission, leaving the academic community bereft of reusable codebases, data, and design blueprints.
2. **Inefficient Knowledge Transfer** - Students who search tested references spend too much time sorting through disparate blogs, GitHub snippets, and poorly indexed institutional archives.
3. **Monetization & Motivation Gap** - Without an opportunity to sell or license their work, students have little financial motivation to go beyond grading rubrics in their project development; potential sources of revenue remain untapped.
4. **Quality & Credibility Concerns** - Where ad-hoc sharing does take place, there is little transparency around the project scope, completeness of documentation, or technology stack, making it risky for buyers to invest effort or money.

Scope of the Problem

The problem focuses on digital academic artifacts such as software, research reports, hardware drawings, and datasets and does not concern the modality of physical shipment or plagiarism detection grids or generic freelance services brokering. Stakeholders include students-both sellers and buyers-academic mentors, innovation hubs, and potential recruiters.

Opportunity Statement

If Project X could secure and deliver such a marketplace, based on student-centric architecture and rich capabilities for categorization, searching, and transacting, then:

1. Work long dormant in academia could find application in solving real-world problems
2. Learners would access credible referents more swiftly

3. Students would derive income from their efforts while at the same time building public portfolios
4. The universities would benefit from increasing visibility and impact of student innovation.