MEDICAL SCHOOL APPLICATION ORGANIZER PROPOSAL

ANALYSIS OF MINT BUDGETING APPLICATION PROPOSAL

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By
Tyler Donovan

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Technical Team Members:
Tyler Donovan

On my honor as a University student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments.

ADVISORS

Ben Laugelli, Department of Engineering and Society
Brianna Morisson, Department of Computer Science

Introduction

Getting accepted into a medical school is becoming increasingly difficult. As of 2021, the year-over-year growth of applicants is about 3 percent, while the number of applicants admitted remains stable. Applicants are recommended to apply to at least 20 to 25 schools per application cycle (Moon, 2021) under increased pressure of decreasing acceptance rates. Despite many applicants' efforts, the difficulty of entering medical school continues to increase and applicants must organize large amounts of varying applications and documents during the application process. To support the goal of a successful medical school admission, it is important to focus on making the organization of applications and related documents as easy as possible for applicants. Organization can help relieve anxiety, sharpen focus on more important tasks, and promote productivity ("Can organizing impact your mental health?," 2023).

I propose the development of a medical school application organizer to aid applicants in their effectiveness during the application season, by leveraging the positive impacts of good organization. This application will integrate cloud storage, document editing, and application tracking into one location allowing medical school applicants to stay organized and work effectively on their applications. Because the success of an application is sociotechnical in nature, it is necessary to understand how technical, social, economic, and other factors, work together to affect the project. Consequently, I will draw on the STS framework of actor-network theory to investigate the failure of Intuit's Mint application, an online budgeting and finance platform designed to help users save money and gain financial literacy. I will accomplish this by researching the technical design decisions and social factors such as the interactions between Intuit and its consumers that contributed to the demise of Mint. This will give me insights into

the impacts of specific social factors allowing me to monitor them to create a better final product.

Ignorance of the complex relationships between technical and social factors in a project will ultimately lead to the development of a system that cannot properly handle those interactions. If this outcome occurs, the project will fail. Because the challenge of getting into medical school is sociotechnical in nature, it requires attending to both its technical and social aspects to accomplish successfully. In what follows, I set out two related research proposals: a technical project proposal for developing a medical school application organizer that combines key aspects of the application into one location and an STS project proposal for examining poor leadership decisions, poor design decisions, and misunderstanding of users motivations in the failure of Mint.

Technical Project Proposal

Most medical school applicants have to manually keep track of all their application data, including primary and secondary status, personal statistics, and progress for each school. No software provides students the ability to organize this data into one place. Applicants typically utilize a cloud storage system and writing software to organize and complete their secondaries ("Your Medical School Application: Getting Ready for Secondary Essays," 2024). Spreadsheets are then used to track the application progress of each school (Gambitbiz, 2019). The primary downside of this process is that it is manual and requires applicants to juggle multiple software, documents, and web applications to stay organized. Given the increasing difficulty of medical school applications, this process is becoming more labor-intensive and time-consuming for applicants.

In recent years, Cycle Track (Asmusin et al., 2024) was developed to address the disadvantages of this manual organization process, however, applicants continue to use traditional means. The manual process includes tracking school criteria/metrics on a spreadsheet, tracking dates in a calendar, writing essays, organizing documents in a cloud storage system, and manually updating the progress of each application (Lee, 2022). Cycle Track improves the manual process using a graphical user interface (GUI) to track schools' metrics and applicant progress in one location. Additionally, users can track their statistics and use live data to compare it with other users. In an interview with D. Dhawan, a current medical school applicant, he claimed live data comparisons helped ease some of his anxiety during applications (D. Dhawan, personal communication, October 6, 2024). Cycle Track is therefore an adequate tool for organizing applications by consolidating information applicants must track, improving inconveniences in the manual organization processes.

However, there is a problem with Cycle Track's design. Cycle Track does not solve the multi-platform issue and specific data is unconsolidated. Cycle Track assumes its users will want to use a GUI over a spreadsheet that accomplishes similar things. If this flaw persists, applicants will continue using spreadsheets since Cycle Track will be minimally beneficial to them. It would require applicants more effort to learn a new system than a familiar one. Without synthesizing all application data into one program, applicants will continue to track items manually and harbor extra mental burdens. Therefore, this system only partially accomplishes its goal of improving the current organization practices to improve users' mental health and reduce cognitive load.

This project aims to address this flaw by creating a medical school application system that handles all parts of the application process to improve user's mental health and reduce

cognitive load. Staying organized during the application process can help improve an applicant's mental health and success throughout the process (Wang, 2022). The proposed system will promote organization by labeling and tracking users' documents related to each school, integrating a calendar directly into the user interface for event tracking, auto-populating schools' secondary prompts when available, and automating the progress tracking systems for each school.

This project will be divided into two subprojects developed in parallel. Each project will refer to concrete requirements based on user discovery data. The first subproject is the frontend development creating the GUI for the project. The GUI will be constructed using react.js and Javascript. The second subproject will be the development of the backend application program interface (API). The API will be developed using Python and hosted using Amazon Web Services. Both subprojects will progress using agile development processes. After completion, the frontend project will be integrated with the backend project to display any necessary data. The application can then be released as a beta to random users for testing and feedback.

The initial design for the system will come from resources regarding current systems like Cycle Track, articles defining necessities for the application process, and articles for developing scalable software systems. The subprojects will use iterative agile methods which allow reflection of the system during different milestones in development to address any design decisions for the following steps. To demonstrate the system's value, it will be tested for an entire application cycle on medical school applicants to measure how it can positively affect their mental health and success in the application process.

STS Project Proposal

In 2007, Mint was introduced as one of the first free budgeting applications to be used by everyday consumers. Mint's purpose was to allow simple tracking of finances (expenses and budgets) to put people more in control of their financial well-being. Mint gained lots of traction amassing 3.6 million active users by 2021, primarily due to its effectiveness in helping users budget appropriately. Intuit attempted to integrate it with Credit Karma which ultimately failed (Gross, 2023). As a result, while still effective functionally, Intuit announced it would be shutting down Mint in 2023 due to its operational costs and inability to monetize the service.

Currently, there are many stances as to the factors that contributed to Mint's downfall. The factors include poor project management, lack of prioritization, poor design decisions, and lack of understanding of users (Asplund, 2024). Some writers stress that offering free services and generating revenue through ads proved to be a poor design decision. Other writers argued that during Mint's integration with Credit Karma, stripping some of Mint's key features that users loved highlighted poor design decisions (Vaughan-Nichols, 2023). Some less common sources attribute the failure to the fact that it may have been a predetermined failure planned by higher-ups in the company under the premise that acquiring Mint would serve to expose its users to Intuit's main revenue source Credit Karma (Jaworski, 2023). While those problems indicate specific factors leading to the destruction of Mint, note that many other factors still need to be considered.

While each of these aspects played a role in the demise of Mint, each factor alone does not fully explain why Mint failed. Each factor was addressed as an isolated reason for why Mint may have failed, but in reality, it is the combination of all these factors as part of a larger problem that ultimately caused Mint's failure. More specifically, a single factor will not cause a technical project to fail, rather it is multiple factors and the interactions between those factors

that cause the project's failure. Current perspectives on Mint's failure ignore the complex interactions between developers, Intuit leadership, consumers, and Mint product itself. Consequently, the reasons for Mint's failure cannot be truly understood without considering the complex interactions taking place between technical and social factors.

Understanding the interactions between these entities and where the shortcomings occurred throughout their interactions will give me a more holistic understanding of why the Mint project failed. In turn, I argue that poor project planning, consumer goals, consumer, needs, poor design decisions, and leadership motives led to the demise of Mint. More specifically, I suggest that the interaction between these factors caused a substantial delay in the proper integration and development of Mint into Intuit's technical infrastructure causing an otherwise successful and useful product to fail.

My analysis of Mint's downfall will draw from the science, technology, and society (STS) concept of actor-network theory (ANT). ANT, developed by STS scholars Michel Callon, Bruno Latour, and John Law, examines that any technical project can be viewed from the perspective that a project represents a network of human and non-human actors brought together by a network builder to accomplish a shared goal. ANT's key concept is that understanding the relationships and interactions between actors in a network helps us better understand a network's strengths and weaknesses and ultimately determine its success or failure (Cressman, 2009). Additionally, I will draw upon Michel Callon's concept of translation, which primarily focuses on how networks form, to better understand where and why Intuit may have failed to integrate actors into the Mint project network (Callon, 1986). To support my argument I will analyze evidence from news articles, interviews, user stances on social media, and published media from Intuit.

Conclusions

The medical school application organizer improves upon existing designs by reducing the time and mental effort spent on manual processes. It offers better value to medical school applicants by providing a product that condenses application material into one location. The ANT analysis of Mint's downfall helps me better understand how interactions and relationships between social actors such as developers, leadership, consumers, and the product itself, can change the outcome of a sociotechnical project. Using these insights I can effectively manage relationships between specific social and technical aspects of a project to produce a better outcome. Taking the negative social factors identified from the STS analysis and turning them into constructive relationships can directly inform the development of the technical project positively. For example, a proper understanding of consumers can inform the technical project by identifying real problems consumers need solved by the development team. The STS analysis helps inform me on how relationships between social actors can create decisions (such as poor project planning) that impact the development of an organizational technology and the technical project helps address the sociotechnical challenge by instilling features that directly target users' pain point areas. Together, these resources allow me to address the sociotechnical challenge of developing a medical school application organizer by leveraging insights from the STS analysis to inform development in the technical project.

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