

Sociotechnical Synthesis

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Computer Science

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Introduction

My technical project and my research paper are not closely related, but they do both feature Application Programming Interfaces (APIs) as an integral part of the paper. In my technical project, I focused on the impacts of failed code maintenance on software engineering teams, drawing from first-hand internship experience related to an API. In my STS research paper, I delved into the ethical impacts of API usage, such as the importance of using ethics in development to mitigate security risk and protect users, among other ethical issues. There is a crossover in both papers as I looked at the responsibilities of developers and the importance of making conscious decisions in the development process.

Technical Project and STS Research Paper

In my technical project, I covered prior internship experience and delved into the practical aspects of software engineering, particularly focusing on the challenges and importance of code maintenance and management. When working as a site engineering intern at the Washington Post, I dealt firsthand with the complexities of managing outdated APIs and the necessity of developing new ones to ensure system reliability and efficiency. In my STS research paper, I conducted an in-depth exploration of the sociotechnical implications surrounding ethics in API development, looking at the multifaceted challenges faced by engineers and organizations in maintaining and using APIs, with a particular focus on the ethical considerations inherent in this process. I used pre-existing literature, case-studies, and real-world examples to explain the complex relationship between technological innovation, ethical decision-making, and societal values. By shedding light on the ethical imperatives and importance of conscious design in API development, my research aimed to foster a deeper understanding for the responsibilities

inherent in software engineering and to advocate for the adoption of ethical frameworks that prioritize the well-being of users and uphold the existence of an ethical digital ecosystem.

Conclusion

Through the integration of my technical project and STS research, I have gained a comprehensive understanding of the symbiotic relationship between technology and society. By addressing the ethical dimensions of code maintenance and development, I have come to appreciate the broader implications of being an ethical developer, taking values in code development beyond technical functionality. Moving forward, as I graduate and begin working as a software engineer, I am committed to advocating for responsible innovation and ethical decision-making in my work, ensuring that technology serves the interests of society as a whole.

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