

CSS 497 Abstract Form

Name: Safwaan TaherFaculty Advisor: Dr Afra MashhadiQuarter/Year: Summe 2023Title: **Toast Software Engineering Internship**

The abstract should be limited to 200-400 words describing the nature of the project and the results obtained. The abstract is due prior to submission of your final report to your faculty advisor.

Toast Inc. is a leading technology provider in the restaurant industry, offering a comprehensive suite of solutions including management, payments, insights, menus, and more. During my internship, I was a part of the Restaurant Platform Team, which played a pivotal role in reshaping the backend architecture, transitioning from a monolithic structure to a dynamic microservices framework powered by technologies like DynamoDB, RPC, and other APIs.

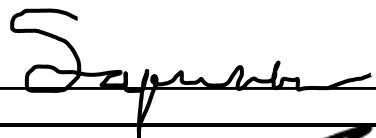
Our primary objective was to enhance the efficiency and scalability of the backend, a crucial aspect for Toast's web and mobile teams. This endeavor primarily involved the gradual migration of the backend platform from a monolith to a microservice-oriented architecture. This transition significantly improved the efficiency and speed of the backend platform, which was previously impacted by a high volume of requests as Toast continued to scale.

My responsibilities within the team encompassed a diverse range of tasks. These included optimizing hardware allocations, improving system performance, addressing RPC bugs, and developing custom functions for deprecated libraries as we upgraded our technology stack. Leveraging my skills in Java and acquiring new ones in Kotlin, I crafted enterprise-grade code to tackle the aforementioned challenges. An integral part of my contributions was the implementation of a robust testing approach. I utilized both proprietary and in-house testing software to meticulously review my code, maintaining its integrity through industry-standard testing pipelines such as Jenkins and GitHub Actions.

By working closely with my team, I achieved several accomplishments and rigorously tested my solutions in the sandbox, preproduction, and ultimately, production environments. The most tangible validation of my efforts was witnessing my contributions being deployed to production servers, effectively addressing real-world scenarios, and underscoring the value of my work. As I write this, my internship has concluded, but the dedicated platform and services teams at Toast persist in their pursuit of scaling and optimization efforts.

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Yes ☒ No ☐

Student Name: Safwaan TaherSignature: Faculty Advisor: Dr Afra MashhadiSignature: 

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A handwritten signature in black ink, consisting of stylized, overlapping loops and a long, sweeping horizontal stroke at the end.

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