

# ABRAHAM BELAYNEH

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## Education

### California Institute of Technology

*Bachelor of Science in Computer Science*

Sep 2021 – Jun 2025

*Pasadena, California*

## Relevant Coursework

**Computer Science:** Introduction to Python , Data Structures , Game Design in C , Computer Systems and Architecture , Introduction to Learning Systems , Machine Learning and Data Mining , Learning Systems Project Class , Algorithms, Discrete, Relational Databases

**Mathematics:** Single Var Calc , LinAlg, Multivar Calc , Differential Equations , Probability

## Skills Summary

**Languages:** Python, Java, JavaScript, Objective-C, Swift, C, Typescript, SQL

**Frameworks & Packages:** React.js, Redux, Node.js, Express.js, MongoDB, MySQL

**Developer Tools:** VS Code, Eclipse, IntelliJ, Atom, Figma, Git/Gitlab, Bash, WSL, JIRA, Docker, CI/CD, Jenkins, Kubernetes, Springboot

**Languages:** Japanese, Spanish, English

**Abilities:** Self-Motivation, Scientific Writing, Project Management, Analytical Thinking

## Experience

### Snap

Jun 2024 - Sep 2024

*Software Engineering Intern*

*Santa Monica, CA*

- Took charge of a multitude of high-impact projects in Objective-C on Snap's Platform Team.
- Contributed to the development of Snapchat's brand new official native iPad app, focusing on optimizing performance and ensuring a seamless user experience across devices. Added +20M users and increased time on app by +40%
- Integrated real-time page metrics, providing developers with actionable insights for performance optimization. Enabling developers to get user journey metrics throughout the app positively increased user engagement on new features.

### NVIDIA

Jun 2023 - Sep 2023

*Software Engineering Intern*

*Remote*

- Led development of new feature to optimize machine leasing process, increasing efficiency for over 2,000 employees
- Collaborated cross-functionally with business and operations teams to understand workflow and requirements for new features.
- Utilizing an algorithmic approach, reduced average lease usage time by 20% and decreased equipment downtime by 15% which saved immense resources for the entire overlying software.
- Established processes for rapid iteration, gathering user feedback, and continuous improvement post-launch
- Developed intuitive front-end interfaces using modern frameworks to display real-time availability and streamline lease creation

### NVIDIA

Jun 2022 – September 2022

*Software Engineering Intern*

*Remote*

- Working with the Cloud Infrastructure Team at NVIDIA on a cloud-based service.
- Tasked with developing a method to enhance runtime capabilities when deploying production builds of the cloud services' Web UI. This method is being efficiently integrated into the deployment pipeline.
- Lead the usage of Dockerfiles and React-based development to also serve as tools to generate web pages automatically which decreases WebUI pipeline loadtime by 70%.
- Debugged and developed bug fixes for more than 50 current software engineers using the cloud service.

## Projects

### Winnowing | Python

- Implemented winnowing algorithm in Python to efficiently detect copied code snippets with over 90% accuracy.
- Engineered solution to rapidly compare millions of lines of code, reducing plagiarism detection time by 70% compared to previous method.
- Developed highly scalable approach by optimizing data structures and algorithms, enabling software to scale to any codebase size.
- Enhanced algorithm to account for common obfuscation techniques, maintaining high plagiarism detection rates.
- Prototyped initial concept in 4 weeks and delivered full solution in 8 weeks within projected timeline.