

Marcos Acosta: Software Engineer

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Backend engineer specializing in distributed systems and machine learning infrastructure. Experience building scalable data pipelines that process terabytes daily, designing reusable software, running large-scale experiments, and delivering data-driven insights to inform features that impact hundreds of millions of users. Active in the NYC coding community, with personal projects spanning frontend development to game design.

Software Engineering Experience

Languages used: C++, TypeScript (JavaScript), Java, Python, SQL

L4 Software Engineer @ Google – Google Play (Apps ML) – July 2023 - Present

Recent highlights:

- Developed and launched backend systems for the Comics Hub, a new Manga/Anime destination on the Play Store serving 400K daily active users in Japan
- Designed and implemented a relevance ranking framework deployed across multiple Play Store surfaces, enabling personalized content recommendations based on user activity
- Improved ranking optimization workflow by implementing state-of-the-art hyperparameter tuning, reducing training cycles from O(days) to O(hours)

Software Engineering Intern @ Google – Google Play (Play Analytics) – Summer 2022

- Designed user segmentation system leveraging Google's TFX platform to automatically identify emerging user cohorts through unsupervised learning

ML Engineering Intern @ Masimo – Summer 2021

- Leveraged Computer Vision algorithms to reliably extract readings from EKG monitor video feeds

Personal projects

- Developed csshell.com, which reached the front page of Hacker News and garnered 24K visits in one week
- Contributed to [I'm Not a Robot](https://imnotarobot.com), which has received over 2M visits

Research Experience

Student Researcher @ Harvey Mudd College – Music Information Retrieval Lab (MIRLAB) – Spring 2022

- Co-authored "An Exploration of Generating Sheet Music Images" published at ISMIR 2022, exploring novel approaches to direct sheet music generation bypassing traditional symbolic intermediates ([link](#))

Student Researcher @ Brown University – Socially Responsible AI for Computational Creativity – Spring 2021

- Developed encoder-decoder architecture for ASL-to-text translation achieving 83% accuracy, addressing gaps in Sign Language Recognition research ([link](#))

Education

B.S. Computer Science, Harvey Mudd College

Sep 2019 – May 2023

GPA: 3.969