

Education

Harvard College

Computer Science
Class of 2025

Chadwick High School

GPA: 4.66 Weighted, 4.0 Unweighted
Class of 2021

Experience

University of Southern California, Information Sciences Institute June 2019 — July 2021

Software Engineering Intern

- Developed software in Go and Python for orchestrating distributed system experiments.
- Integrated TCP and Etcd protocol support for sending machine-to-machine messages.
- Designed and implemented Go API for experiment instructions.

Apple WWDC Scholar

Summer 2019

iOS Developer and Scholarship Winner

- Developed a machine-learning based productivity app in Swift and Xcode.
- Chosen as an Apple WWDC Scholarship winner and attended WWDC 2019 in-person.

Google Code-in Winner

December 2017 – April 2019

Open-source Contributor

- Selected as Grand-prize Winner of Google Code-in 2017 for my open-source contributions.
- Consistent contributor to Zulip open-source team chat project, using JavaScript and Python.
- Worked on emoticon translations, Zoom API support, Swift API library, and more for Zulip.

Selected Individual Projects

Full portfolio available at www.marco.how.

School Scheduling Algorithm, "Classify"

January 2020 – August 2021

- Developed original school scheduling software for identifying optimal class meeting times, creating student schedules, and accommodating constraints brought by COVID-19.
- Designed and implemented React frontend and Python/Flask backend using DynamoDB, including custom algorithm based on the Hospitals-Residents problem.
- Successfully used for Chadwick School's scheduling of 2020/21, 2021/22, and future years.

Dashbrain

January 2021

- Designed and developed a web app for improving the chat experience during Zoom calls using Figma, TypeScript, React, and Firebase.
- Implemented Q&A, polls, custom group chats, and more using realtime event listeners.

FlannelScript

December 2018

- Wrote a grammar, lexer, and runtime for my own open-source, strongly-typed, interpreted programming language using JavaCC for parser generation.

Skills

Languages & Technologies: *Advanced:* TypeScript, JavaScript, React, Node.js, React Native;
Proficient: Swift, Python, Go; *Familiar:* Angular, Vue, Java

Skills & Services: GitHub, Figma, Bash/Zsh, Vim, Firebase Auth, Firestore, Google Cloud Functions, Vercel, DynamoDB, EC2, AWS Lambda, Heroku, Algolia, Twilio SendGrid