

# Ayush Kumar

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🌐 [ayukmr.com](https://ayukmr.com)

## EDUCATION

- The Nueva School / Software Engineering, Advanced ML, Intro ML, Math 3, Intro Physics 2015 - Present
- Stanford Pre-Collegiate Studies / Product Design 2024
- Inspirit AI Pioneers, Inspirit AI Scholars / High School Level 2022, 2021

## EXPERIENCE

### Founder & CEO / Octalwise LLC 2022 - Present

Software company publishing apps on the App Store, including Tracks (iOS app) and Acidity (extension). 🌐 [octalwise.com](https://octalwise.com)

### Full-Stack Intern / Dragonfruit AI React, Flutter / 2024

Developed the Dragonfruit mobile app using both React and Flutter. Managed distribution of the app through the Google Play Store. 🌐 [dragonfruit.ai](https://dragonfruit.ai)

### ML & Frontend Intern / Dragonfruit AI Python, React / 2023

Implemented frontend and backend components for general object filtering on camera feeds using OwlVIT, an optimized object detection model. 🌐 [dragonfruit.ai](https://dragonfruit.ai)

### Robot Programmer / FRC Team 4904 Java / 2023 - Present

Worked as a key programmer on the 4904 FRC team at The Nueva School, writing the Java code that is run on the robot.

## PROJECTS

### Tracks / Octalwise Swift, Crystal

Developed and published iOS app for monitoring live Caltrain timings through the API. Wrote server in Crystal for caching API responses for the app. Available on iOS in the App Store. 🌐 [octalwise.com/tracks](https://octalwise.com/tracks)

### Acidity / Octalwise JavaScript, HTML/CSS

Developed Safari extension for navigating to archived versions of pages using archive.ph. Available on macOS, iOS, and iPadOS in the App Store. 🌐 [octalwise.com/acidity](https://octalwise.com/acidity)

### Glaze Ruby, LLVM

Created compiler for a new language created with the goal of learning how to use LLVM. Ruby bindings to LLVM are used to generate the LLVM IR and compile programs to machine code. 🔗 [ayukmr.com/glaze](https://ayukmr.com/glaze)

### ToDoBox Python, React

Created todo app with support for descriptions, sections, dates, and more. Uses a React webapp for the frontend and a Python server using Firebase for data storage and authentication. 🔗 [ayukmr.com/todobox](https://ayukmr.com/todobox)

🔗 <a href="https://ayukmr.com/poplar">ayukmr/poplar</a>	Simple x86 operating system with kernel written in C.	Assembly, C
🔗 <a href="https://ayukmr.com/nn">ayukmr/nn</a>	From-scratch deep learning library implementing backprop.	Rust
🔗 <a href="https://ayukmr.com/ftc-2023">ayukmr/ftc-2023</a>	FTC robot code written as the sole programmer of a 10-member team.	Java
🔗 <a href="https://ayukmr.com/dotfiles">ayukmr/dotfiles</a>	Personal dotfiles for various tools including vim, zsh, tmux, and git.	Various

## SKILLS

### Domains

- Full-Stack (Web, Servers), Apps, Machine Learning, Algorithms, Games

### Languages

- Advanced: Rust, Python, JS, HTML/CSS, Ruby, Swift, Crystal, SQL, VimL, ZSH
- Knowledge: C, C++, C#, Clojure, Dart, Java, Go, Lua, NASM

### Libraries & Tooling

- Advanced: Git, Vim, tmux, SQLite, Firebase, React, Flask
- Knowledge: Flutter, WASM, LLVM, WGPU, Unity

## AWARDS

- Silver Level / USACO 2023 / 9th
- WWDC Student Scholarship / Apple 2019 / 4th
- Best Presentation / Inspirit AI 2022 / 7th
- Third Place / GG STEM Fair (2024), Second Place / San Mateo STEM Fair (2020)