

# Alex Lin

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## EDUCATION

### Virginia Tech

Expected Graduation — Dec. 2023

B.S. in Computer Science

GPA — 4.0/4.0

- Relevant Courses: Data Structures, Computer Systems, Discrete Mathematics, Linear Algebra

### Thomas Jefferson High School For Science and Technology

Class of 2021

High School Diploma

Weighted GPA — 4.419/4.0

- Relevant Courses: Computer Vision, Mobile and Web Dev, Calculus & Statistics, Physics

## EXPERIENCE

### R Squared Robotics

Christiansburg, VA

C++ Software Engineer

Jan 2022 – Present

- Sole developer of a *full-stack application* that allows for remote configuration and streaming of a machine's point cloud detection through *WebSockets* and *WebRTC* technologies.
- Produced a general purpose frontend application through *Next.js* with *TailwindCSS* and *Three.js* that allows real-time communication between the backend. *Tauri* was additionally used for desktop support.
- Designed a *C++* backend server that uses a one-to-many model to stream data to multiple devices simultaneously, built with a callback structure to ensure extensibility and flexibility.

### Glimmr

Charlottesville, VA

Junior Software Developer

May 2021 – Sep 2021

- Established a unified type system to be used across all significant aspects of the project to reduce runtime errors and foster cohesiveness between platforms.
- Adapted readily from a sudden shift in frameworks from *Flutter* to *React Native*, rewriting my portion of the codebase in less than two weeks.
- Primary developer of the application's onboarding process, designing a streamlined signup flow.

### Children's National Research Institute

Washington, D.C.

App Development Intern

Jun 2020 – Aug 2021

- Creator of a *Xamarin* application that primarily serves as an app version of the DCCOVIDConnect website and displays information from various sources intuitively and responsively.
- Implemented a parser that analyzes and converts *HTML* into *Xamarin XAML* to display as app components that dynamically update with the website's *MySQL WordPress* database.
- Worked in a team of three to coordinate the design and direction of the app.

## LEADERSHIP & EXTRACURRICULARS

### Totem

Remote

Startup — Lead Developer

Jul 2022 – Present

- Developed an *iOS* application with a team that aims to help keep people connected and allow them to locate each other under extreme circumstances quickly.
- Utilized *BLE* to have real-time communication between multiple devices without service or WI-FI.
- Networked and connected with individuals to understand core technologies and address limitations.

### Astrobotics

Blacksburg, VA

Project Team

Oct 2021 – Jan 2022

- Created algorithms in *C++* to automate a rover to navigate various terrain and collect material systematically.
- Worked with the *ROS* library to communicate between systems that control the rover.

## SKILLS, AWARDS, & INTERESTS

**Programming Languages:** JavaScript/TypeScript • Python • C/C++ • C# • Java • Rust • Go • Swift • HTML5/CSS/SCSS

**Frameworks:** Git • Next.js/React/React Native • MySQL/MongoDB • Xamarin • Flutter • OpenCV • TensorFlow • OpenGL • iOS

**Languages:** English (Native) • Fujianese (Native)

**Awards:** Best Financial Hack, Education Track for Finance QuizzAR (HackDuke 2021) • AP Scholar with Distinction (CollegeBoard 2020) • Silver Medal (USACO 2020)

**Hobbies & Interests:** Cooking • Gaming • Fitness • Digital Art • Photography