David Li

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Palo Alto, CA College Park, MD

Education

University of Maryland *BS, Computer Science* *BS, Physics* Estimated May 2027
Coursework: Algorithms, Organization of Programming Languages, Differential Equations

Gunn High School *GPA: 4.0/4.0, Weighted: 4.3* May 2024
Coursework: Intermediate Software Design in C++, Linear Algebra, Multivariate Calculus, Applied Math

Projects

Gunn Alumni Directory *Class Project* Feb 2023–Jun 2023
Editable alumni directory website for Gunn High School

- Designed, secured, and managed the Supabase backend and SQL database
- Built a school email verification system with Next.js, Nodemailer, Nhost, and a GraphQL client
- Wrote an authentication backend with Fastify

Discrete Cosine Transform Demonstration *Course Project* May 2023
Web app that illustrates forward and inverse cosine transforms of images

- Built an interactive Next.js webpage with image uploading
- Implemented the discrete cosine transform in two dimensions and one dimension of variable size

Scheme Interpreter *Personal Project* Nov 2022–Feb 2023
Interpreter for the Scheme programming language written in standard C++

- Wrote a parser by hand and an evaluator with support for closures and variadic functions

Volant *GunnHacks 9.0, 2nd Place* Jan 2023
Web app that lets users live-stream to streaming platforms as a webcam-tracked virtual character

- Integrated the webcam, virtual character, user interface, and output live stream with MediaPipe Holistic, Three.js, and the MediaStream API

Lapse *GunnHacks 8.0* Feb 2022
Java app for creating time-lapses of the user's face by taking daily photos and aligning the faces

- Built a user interface, including a system tray icon and reminder timer, with Swing and AWT
- Aligned photos by detecting landmarks with Google Cloud Vision and transforming the photos with Swing

Minecraft Servers *Hobby* Aug 2024–Sep 2024

- Customized and concurrently hosted persistent video game servers with Docker Compose

Skills

Programming Languages: C++, TypeScript, Python, Java, C, JavaScript, HTML
Software: React, Git, Linux, Vagrant, Docker
Certifications: CodinGame C++, coding speed, and collaboration certificates
Awards: University of Maryland President's Scholarship, National Merit University of Maryland Scholarship, USACO gold, 3x AIME qualification, HMMT November 2022 Sweepstakes 10th place team, AMC 10 distinction