

Brandon Li

978-245-5532 | jobs@brandonli.me | brandonli.me | linkedin.com/in/brandonli28 | github.com/PulseBeat02

EDUCATION

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| University of California, Los Angeles (UCLA) <i>Bachelor of Science in Computer Science</i> | Expected June 2027 <i>Los Angeles, CA</i> |
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EXPERIENCE

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| Software Engineering Intern (Incoming) <i>Google (YouTube)</i> | June 2026 – Sept 2026 <i>San Bruno, CA</i> |
| Software Engineering Intern <i>VideoLAN</i> | June 2025 – Sept 2025 <i>Remote</i> |
| <ul style="list-style-type: none">Developed multiple C/C++ video filters for VLC Media Player (traffic cone).Integrated Segment Anything Model 2 (SAM2) with OpenCV to segment video objects.Added face detection using YuNet ML model to track over 100 faces concurrently.Engineered fast 60 FPS video-to-GIF conversion by developing 5 dithering algorithms.Analyzed AV1 specification and studied dav1d decoding algorithms to deepen knowledge. | |
| Software Developer Intern <i>Halvex</i> | Feb. 2023 – June 2023 <i>Remote</i> |
| <ul style="list-style-type: none">Designed a MongoDB-based TypeScript RESTful API to fetch customer data and emails.Launched a JavaScript Discord bot to link 100+ customers' WHMCS accounts with Discord.Established secure OAuth2 gateway RESTful API using Express.js for account verification. | |
| Java Mentor <i>Chelmsford Chinese Language School</i> | Sept. 2021 – Feb. 2022 <i>Remote</i> |
| <ul style="list-style-type: none">Taught 20 weekly 1-hour lessons to 10 middle/high-school students.Raised nearly 1,000 dollars for the non-profit, helping the school keep afloat during COVID.Spent 1-2 additional hours weekly preparing homework/slides to help students master material. | |

PROJECTS

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| yt-media-storage <i>C++, Assembly/SIMD, FFmpeg, Coding Theory, Compression</i> | Feb. 2026 – Present |
| <ul style="list-style-type: none">Popular C++ tool (620 stars, 60+ forks) for encoding file storage into YouTube videos.Achieved 100x speed-up via inline Assembly, SIMD intrinsics, and OpenMP parallelization.Supports optional menu and file encryption via Qt 6 and libsodium for added privacy.Uses robust CRC/Wirehair error-correction to novelly bypass YouTube video compression.Reached #5 on Hacker News (Y Combinator) within 12 hours, generating thousands of views.Includes <u>technical explanation video</u> with over <i>YT IMPRESSIONS</i> impressions, educating over <i>YT VIEWERS</i> viewers. | |
| mcav <i>Java, Spring Boot, TypeScript, CI/CD</i> | June 2020 – Present |
| <ul style="list-style-type: none">Popular Java framework (130 stars, 10 forks) for building media applications.Integrates with VLC/mpv with a documented image-processing pipeline API.Uses Spring Boot to stream sub-100ms latency audio to TypeScript/Howler.js frontend.Configured CI/CD with TeamCity on Oracle Cloud to automate software releases.Engineered native media player that is over 5x faster than pure-Java players. | |
| Pulse Media Player <i>C++, OpenGL, OpenAL, FFmpeg</i> | Feb. 2026 – Present |
| <ul style="list-style-type: none">Robust C++ media player written in less than 1K lines of code with lightweight UI.Implemented GPU-accelerated OpenGL shader pipeline enabling smooth 1080p playback.Supports OpenAL for automated audio device selection and smooth playback. | |

TECHNICAL SKILLS

Languages: Java, C/C++, JavaScript/TypeScript, Assembly

Frameworks & Libraries: Spring, Hibernate, FFmpeg, OpenCV, VLC, React, Next.js, Tailwind

Technologies: Git, MongoDB, Google Cloud, Oracle Cloud

Awards: USACO Gold, Google Foobar