

Brandon Li

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

EDUCATION

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

Software Engineering Intern (Incoming) <i>Google (YouTube)</i>	June 2026 – Sept 2026 <i>San Bruno, CA</i>
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Software Engineering Intern <i>VideoLAN</i>	June 2025 – Sept 2025 <i>Remote</i>
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- 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>
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- 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>
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- 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

yt-media-storage <i>C++, Assembly/SIMD, FFmpeg, Coding Theory, Compression</i>	Feb. 2026 – Present
<ul style="list-style-type: none">• Popular C++ tool (660 stars, 70 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>YTIMPRESSIONS</i> impressions, educating over <i>YTIEWERS</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