

# Brandon Li

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## EDUCATION

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<b>University of California, Los Angeles (UCLA)</b> <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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<b>Software Engineering Intern (Incoming)</b> <i>Google (YouTube)</i>	June 2026 – Sept 2026 <i>San Bruno, CA</i>
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<b>Software Engineering Intern</b> <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.

<b>Software Developer Intern</b> <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.

<b>Java Mentor</b> <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

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<b>yt-media-storage</b>   <i>C++, Assembly/SIMD, FFmpeg, Coding Theory, Compression</i>	Feb. 2026 – Present
<ul style="list-style-type: none"><li>• Popular C++ tool (600 stars, 60 forks) for encoding file storage into YouTube videos.</li><li>• Achieved 100x speed-up via inline Assembly, SIMD intrinsics, and OpenMP parallelization.</li><li>• Supports optional menu and file encryption via Qt 6 and libsodium for added privacy.</li><li>• Uses robust CRC/Wirehair error-correction to novelly bypass YouTube video compression.</li><li>• Reached #5 on Hacker News (Y Combinator) within 12 hours, generating thousands of views.</li><li>• Includes <u>technical explanation video</u> with over <i>YT IMPRESSIONS</i> impressions, educating over <i>YT VIEWERS</i> viewers.</li></ul>	

<b>mcav</b>   <i>Java, Spring Boot, TypeScript, CI/CD</i>	June 2020 – Present
<ul style="list-style-type: none"><li>• Popular Java framework (130 stars, 10 forks) for building media applications.</li><li>• Integrates with VLC/mpv with a documented image-processing pipeline API.</li><li>• Uses Spring Boot to stream sub-100ms latency audio to TypeScript/Howler.js frontend.</li><li>• Configured CI/CD with TeamCity on Oracle Cloud to automate software releases.</li><li>• Engineered native media player that is over 5x faster than pure-Java players.</li></ul>	

<b>Pulse Media Player</b>   <i>C++, OpenGL, OpenAL, FFmpeg</i>	Feb. 2026 – Present
<ul style="list-style-type: none"><li>• Robust C++ media player written in less than 1K lines of code with lightweight UI.</li><li>• Implemented GPU-accelerated OpenGL shader pipeline enabling smooth 1080p playback.</li><li>• Supports OpenAL for automated audio device selection and smooth playback.</li></ul>	

## TECHNICAL SKILLS

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**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