

# Derrick Lee

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CONTACT INFORMATION	Cupertino, CA <a href="mailto:dlee3@scu.edu">dlee3@scu.edu</a> — 408-823-7288 — <a href="https://github.com/drkleee3">github.com/drkleee3</a> — <a href="https://www.linkedin.com/in/drkleee">linkedin.com/in/drkleee</a> — <a href="https://drkleee.me">drkleee.me</a>
EDUCATION	<b>B.S., Computer Science (Math)</b> Santa Clara University <b>June 2020</b> (expected) Relevant Coursework: <ul style="list-style-type: none"><li>- Object Oriented Programming (C++)</li><li>- Data Structures (C++)</li><li>- Operating Systems (C/Rust)</li><li>- Theory of Automata and Formal Languages (in progress)</li></ul>
EXPERIENCE	<b>Open Source Developer</b> <b>January 2018 - Present</b> <ul style="list-style-type: none"><li>- Fixed incomplete features, improved and clarified code examples and documentation for <b>serenity</b>, a <b>Rust</b> library for interacting with the chat and VoIP platform Discord's API.</li><li>- Implemented bug fixes and security fixes to open source <b>Node.js</b> chat bot LuckyBot.</li></ul>
RELEVANT SKILLS	<b>Languages</b> <ul style="list-style-type: none"><li>- Rust, C, C++, JavaScript, TypeScript, Python, HTML5, CSS, ARM Assembly, SQL, Bash</li></ul> <b>Related Technologies</b> <ul style="list-style-type: none"><li>- Git, Node.js, GraphQL, PostgreSQL, React, Koa, Apollo, Express, Next.js, Vue.js</li></ul>
PROJECTS	<b>sushii-bot</b> (14,000+ lines of code) <b>December 2017 – Present</b> <ul style="list-style-type: none"><li>- Chat bot for Discord with a ranking system, activity tracker, moderation tools and more with <b>over 64,000 total users</b>.</li><li>- Written in <b>Rust</b> with a <b>PostgreSQL</b> database, <b>diesel-rs</b>, and connection pooling with <b>r2d2-diesel</b>.</li><li>- Paired a website with user leaderboards and statistics made with <b>Next.js</b>, <b>React</b>, <b>Koa</b>, <b>Apollo</b> server and client for <b>GraphQL</b> endpoints, and <b>Join Monster</b> for batch data fetching.</li></ul> <b>Operating System Simulations</b> (5,000+ lines of code) <b>April 2018 – June 2018</b> <ul style="list-style-type: none"><li>- Runs sequential and random disk reads with <b>C</b>, determines time differences and possible causes based on both physical and OS aspects. Programs and set up executed with <b>Bash</b> scripts.</li><li>- Multi threaded simulation written in <b>Rust</b> of different memory page replacement algorithms with given page requests and a range of memory sizes. Data visualized with plots made in <b>R</b>.</li><li>- Benchmarks in <b>Rust</b> to determine the overhead of synchronization primitives (Mutex) and lock contention.</li></ul> <b>vlive-rs</b> (1,000+ lines of code) <b>April 2018 – May 2018</b> <ul style="list-style-type: none"><li>- <b>Rust</b> library for livestreaming platform VLive's API to fetch channel and video data.</li><li>- Implemented on the asynchronous <b>Hyper</b> client with Futures as well as <b>Reqwest</b> for a synchronous API.</li></ul> <b>mp3-fft</b> <b>July 2017</b> <ul style="list-style-type: none"><li>- Web application that takes mp3 files and recommends 100+ headphones based on price, form factor, and music sound signature (bass-heavy, neutral, mid-forward, v-shaped).</li><li>- Uses the Fourier Transform and Welch's method to classify sound signature.</li><li>- Written in <b>Python</b> with a <b>Flask</b> microframework back-end along with <b>Vue.js</b> for front-end.</li></ul>