# Christopher Chau

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## EDUCATION

**University of California, Santa Barbara** — Santa Barbara, CA
*B.S. in Computer Science | GPA: 3.63* — *Expected June 2026*
**Relevant Coursework:** Data Structures and Algorithms, Object Oriented Design, Operating Systems, Discrete Mathematics, Linear Algebra, Differential Equations, Advanced Applications Programming
**Awards/Certifications:** Dean's Honor(Winter 23' - Winter 24'), Intermediate Web Development(CodePath)

## TECHNICAL SKILLS

**Languages**: C++, C, Java, Python, JavaScript, TypeScript, SQL, HTML/CSS
**Libraries and Frameworks**: React, Node.js, Express.js, Next.js, FastAPI, TailwindCSS, Numpy, pandas
**Developer Tools**: AWS (S3), Git, Docker, PostgreSQL, Supabase, Jenkins

## RELEVANT EXPERIENCE

**Southern California Edison** — June 2024 - Present
*Software Engineer Intern* — *Alhambra, CA*
- Contributed to the development of a full-stack web application, reducing annual operational costs by over $600,000 through automated analysis of service-impacting circuits and outage-report generation
- Eliminated 60% of manual configuration tasks for 400+ telecommunication devices by creating automated deployment pipelines, significantly improving efficiency and reliability
- Spearheaded a compliance validation tool that cross-referenced software, port, and asset changes in real-time, automating evidence reviews, enhancing data consistency by 50%, and mitigating compliance risks
- Led a team of 5 interns to create a departmental showcase video, effectively coordinating tasks, managing timelines, and driving collaboration to deliver a well-received presentation

## PROJECTS

**KOS** | *C* — March 2025
- Created a custom OS for a simulated MIPS machine implementing core Unix-style system calls with robust error handling, partial read/writes, and address validation
- Reinforced process control and resource management by tracking file descriptors and semaphores, enabling parallel execution and safe resource cleanup
- Implemented inter-process communication via pipe structures, mirroring Unix pipe semantics and enabling reliable concurrency and data flow between processes

**InterviewIQ** | *React, Express.js, JavaScript, HTML/CSS, PostgreSQL* — May 2024
- Built a web application simulating interviews using OpenAI's API, providing graded responses and detailed feedback to enhance interview preparation
- Designed and implemented a RESTful API to handle CRUD operations for managing user data and interview history, ensuring efficient data handling and storage
- Integrated PostgreSQL to securely store user information and maintain a history of previous interview sessions, allowing users to reflect on previous sessions

**Pathfinding Visualizer** | *React, JavaScript, HTML/CSS* — December 2023
- Constructed a responsive web application that allows users to visualize algorithms on a grid
- Facilitated user engagement through interactive obstacle placement, algorithm selection, and visualization speed
- Deployed real-time visualization of popular pathfinding algorithms, enhancing user understanding of algorithm behavior on a grid from a start to finish node
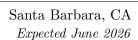
**SpotifySyncYT Converter** | *JavaScript, Node.js, Express.js* — August 2023
- Implemented OAuth authentication to securely access user's Spotify accounts, enabling the utilization of the Spotify API to retrieve user playlists and song data
- Built a JavaScript application using the YouTube Data API to convert a user's Spotify playlist into a YouTube playlist that is downloaded to their local device
- Streamlined the process by implementing a RESTful API, automating the downloading of songs from the playlist to local device, resulting in an 80% reduction in manual installation time