Divik Chotani

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Education

Bachelor of Engineering in Computer Science — Oct. 2023 – June 2027
University of California, Los Angeles — *Los Angeles, CA*

Experience

Undergraduate Research Assistant — Mar. 2025 – Present
UCLA, Samueli School of Engineering — *Los Angeles, CA*

- Contributed to the open-source PaSh project (500+ stars, hosted by the Linux Foundation), by implementing parallel versions of core POSIX commands and submitting enhancements to its compiler optimization passes.
- Actively maintained PaSh's open-source annotations library, extending its semantics and dependency-tracking capabilities to allow users to parallelize their own custom commands while maintaining correctness.
- Created an eBPF program in C, C++, and Rust to monitor system calls, interrupts, and network packets on Linux, enabling dependency tracking and file access auditing.

Software Engineering Intern — Sep. 2024 – Jan. 2025
Validia — *San Francisco, CA*

- Developed a Chrome extension using React and Node.js to protect websites via facial authentication.
- Created a web app in raw HTML, CSS, and JavaScript with a Flask backend to detect deepfake videos in interviews.
- Boosted audio deepfake detection accuracy by 20% (measured on 1,000+ audio samples) using PyTorch.
- Implemented a Fast Fourier Transform (FFT) to extract frequency-domain features from audio clips, improving detection performance.

Software Engineering Intern — June 2024 – Sept. 2024 & June 2025 – Sept. 2025
Pixii AI — *Boston, MA*

- June 2024 – Sept. 2024: Developed a Slackbot with Nest.js and PostgreSQL to generate 30 days of AI-powered ad content in under 30 seconds, automating marketing across 50+ social media accounts.
- June 2025 – Sept. 2025: Built a social media scheduler in TypeScript using React, Nest.js, and Docker to plan and publish posts, greatly reducing manual marketing workload.
- June 2025 – Sept. 2025: Implemented a usage tracker with PostHog, Next.js, and Node.js to analyze user behavior and inform UI improvements, boosting user return rate to 24%.

Projects

Co-op Minesweeper | *TypeScript, Node.js, React, PostgreSQL, Docker* — June 2024 – Dec. 2024
Link to the website

- Developed a full-stack web application with Node.js serving a REST API and React frontend for seamless gameplay and user management.
- Implemented secure authentication with hashed and salted passwords; integrated a PostgreSQL database to store user profiles, scores, and game history.
- Leveraged Socket.io to enable real-time multiplayer functionality, allowing multiple players to collaborate on the same Minesweeper board with instant updates.

Amazon Listing Grader | *TypeScript, Node.js, React, SQLite3* — June 2025 – Sept. 2025
Link to project website

- Built a web app to evaluate and score product listings for any Amazon product where a user inputs a product url and the website scores the product listing and provides insight on how to improve listing.
- Created a responsive React frontend to present AI-powered reviews and suggestions, as well detailed analysis.
- Implemented a Node.js backend with Postgres and deployed via AWS Amplify to allow for continuous deployment and API Gateway for communication between the frontend and backend.

Technical Skills

Languages: Java, Python, C/C++/C#, SQL, JavaScript, HTML/CSS, Rust, Go, BPF, Swift, Kotlin
Frameworks: React, Next.js, Node.js, Flask, WordPress, Material-UI, Tailwind, FastAPI, Vue.js, Svelte, Angular, Django, .NET, Spring Boot
Developer Tools: Git, Docker, Google Cloud Platform, MongoDB, Redis, DynamoDB, GraphQL, bpftool
Libraries: pandas, NumPy, Matplotlib, scikit-learn, PyTorch, libbpf, linux-headers, Axios, Vite, TypeORM, Socket.io