Divik Chotani

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Education

Bachelor of Engineering in Computer Science — Oct. 2023 – June 2027
University of California, Los Angeles, 3.8 GPA — *Los Angeles, CA*

Experience

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

- Developed compiler passes for the Linux Foundation's PaSh project that rewrote sequential shell commands into parallelizable forms for distributed and multi-core systems, cutting runtime of real-world scripts by up to 83%.
- Built an eBPF-based observability tool in C, C++, and rust to track over 1 million concurrent events per program, providing low-latency insights into kernel activity of Linux Operating Systems. (GitHub)
- Extended PaSh's open source Python Annotations library to support user-defined parallelization rules, adding 15+ command classes and ensuring correctness across 50+ parallelized shell scripts.

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

- Built a Next.js and JavaScript Chrome extension to protect sensitive websites behind facial verification using computer vision, reducing unauthorized access attempts by 74% during a 3-month pilot.
- Built a full-stack app with a Flask back-end with RESTful APIs and to support a phone call verifier that detected deepfake voices in real time with 72% accuracy across 500+ test calls.
- Enhanced audio deepfake detection accuracy by 20% (tested on 1,000+ audio samples) using Python with PyTorch, supported by data engineering pipelines for scalable experimentation.

Software Engineering Intern — Jan. 2025 – Sept. 2025
Pixii AI — *Boston, MA*

- Built a Slackbot with Nest.js using AWS Bedrock and LangChain to generate 30 days of ad content in less than 10 minutes, cutting prep for advertisers time by 90%.
- Shipped a social scheduler (React and Typescript front-end and Python backend on AWS) scaling to 1,500+ posts/day; to cut release time from hours to under 15 minutes.
- Built a Next.js analytics dashboard (PostgreSQL and Python backend) and instrumented PostHog across 2,000+ sessions to gain UX insights, and raised user return rate to 24% (from 8%).

Projects

Co-op Minesweeper (Link) | *Golang, AWS, PostgreSQL* — June 2024 – Dec. 2024

- Developed a customer-facing multiplayer Golan, with PostgreSQL for storing user profiles, scores, and game history; deployed services on AWS, scaling to 50 concurrent players.
- Implemented real-time synchronization in Go using web sockets to deliver sub-200ms latency across multiplayer sessions, ensuring smooth gameplay for 50 simultaneous users.
- Enforced Git-based version control with CI/CD, maintained PostgreSQL databases for reliability and scalability, ensuring seamless integrations and stable production releases.

Amazon Listing Grader (Link) | *JavaScript, Java, Spring Boot, MongoDB* — June 2025 – Sept. 2025

- Built a React app using the Gemini api to present ML-driven listing evaluations and recommendations, now used by 100+ users and 1000+ website visits to improve product strategies.
- Developed a Java Spring Boot back end with MongoDB, deployed via AWS Amplify with CI/CD integration, and configured AWS API Gateway for scalable communication between services.
- Processed product URLs to generate quantitative scores and actionable improvement suggestions, leading to a 22% increase in revenue for users.

Technical Skills

Languages: Python, Rust, C#, Java, C++, Go, SQL, JavaScript, HTML/CSS, C, JSON
Frameworks: Angular, Next.js, Node.js, Flask, Spring Boot, .NET, , Django
Developer Tools: Git, Docker, GCP, MongoDB, Redis, GraphQL, AWS, Relational Databases, DynamoDb, Kubernetes
Relevant Courses: Data Structures and Algorithms, Machine Learning, Operating Systems, Software Programming, CPU architecture