

Anish Ahuja

ahujaanish11@gmail.com | 209.452.7731 | LinkedIn | Github

Education

New York University *New York, NY*
Computer Science, Ph.D. 2026 – Present

University of California, Davis *Davis, CA*
Computer Science, B.S.; Mathematics, B.S. 2022 – 2025
Relevant Coursework: Theory of Computation, Programming Languages, Compilers, Program Verification, Modern Algebra, Static Analysis

Research Experience

NYU Analysis of Computer Systems Group *New York, NY*
Advisor: Thibault Dardinier 2026 – Present
Improving the expressiveness of Hypra by implementing automated compositional verification.

Davis Programming Languages Research Group *Davis, CA*
Advisor: Caleb Stanford 2022 – 2025
Extended theory of regular expressions to use string variables with derivative-based satisfiability algorithms. Constructed SMT solver in Rust for satisfiability checking and string matching.

Work Experience

Amazon *Bellevue, WA*
Software Development Engineer 2026
Developed a Now Playing experience for Alexa multimodal devices using React Native, supporting multiple screen sizes, input modalities, and device form factors. Designed and implemented API services to enable video podcast support on Alexa, mediating between backend music platforms and devices to manage play queues, track metadata, and playback control.

Amazon *Bellevue, WA*
Software Development Engineering Intern 2025
Developed testing framework for Alexa Audio QA team. Created ECS Fargate service that uses DynamoDB and Amazon Bedrock to augment existing test data with production data at runtime. Integrated service with existing QA frameworks to facilitate low-friction transition.

UC Davis Department of Mathematics *Davis, CA*
Mathematics Reader 2024
Graded homework for MAT135A under Professor Alexander Wein. Answered student questions about concepts ranging from counting to continuous distributions.

Panasonic Avionics Corporation *Irvine, CA*
Software Engineering Intern 2024
Managed automation for network engineering team. Used Ansible and Python to automate health checks and updates for Cisco network switches. Ran automation scripts to update Cisco Nexus

devices at LAX airport. Configured Ansible automation platform for network engineers to streamline device workflows.

California DMV

Sacramento, CA

Software Engineering Intern

2023 - 2024

Developed web application components and resolved bugs for high-traffic applications. Designed parser to generate dependency trees for XML and JSON files to reduce manual deployment efforts. Created Selenium scripts to automate testing process for applications during transition to AWS. Worked with other government agencies to manage and deliver sensitive user data to required parties.

Preprints

A Theory and Solver for Regular Expressions over Uninterpreted String Variables.

Anish Ahuja, Tiching Kao, and Caleb Stanford.

Skills

Languages: Python, Java, JavaScript/TypeScript, C, C++, Golang, Rust, Kotlin, Dafny

Frameworks: React, Node.js, Next.js, Express, MongoDB, SQL, Flask, Spring Boot

Honors/Awards

MacCracken Fellowship - 2026 - 2031

UC Davis Dean's Honors List - Fall 2022 - Fall 2025