

Anish Parepalli

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EDUCATION

University of North Carolina Chapel Hill

Chapel Hill, NC

M.S in Computer Science, Statistics

Expected: May 2027

- **B.S. in Computer Science and B.S. in Statistics and Analysis**
- **Coursework:** Introduction to Modern Web Programming, Artificial Intelligence, Data Structures & Algorithms, Foundations of Software Engineering, Probability & Statistics
- **TA:** Foundations of Programming (Design Patterns) - Mentored 250+ students in object-oriented programming, algorithms, and software principles, reinforcing communication and leadership skills

TECHNICAL SKILLS

Languages: TypeScript, Python, C, C++, Java, JavaScript, C#, Swift/SwiftUI, SQL, HTML/CSS

Developer Tools & Frameworks: React.js, Angular, Node.js, PostgreSQL, EC2, SQS, DynamoDB, S3

Skills: SQL, GIT, Agile Methodologies, Data Structures & Algorithms

EXPERIENCE

Vanguard

May. 2025 – Aug. 2025

Application Developer Intern

- Designed and deployed **serverless distributed workflows** using AWS Lambda (**TypeScript**) integrated with upstream systems, automating portfolio batch processing and improving **reliability at scale**.
- Improved **product reliability** by enhancing a detection system (**Typescript**) to find unenrolled clients that reduced false positive errors, directly increasing accuracy of daily portfolio reports used by 200+ advisors and senior technology leaders.
- Partnered with engineers to deliver **bug fixes** under 48-hour deadlines, using **real-time metrics** to prioritize fixes and maintain **100%** accuracy in error reporting.

Computer Science Experience Lab

Jan. 2025 – May. 2025

Software Engineer

- **Engineered an AI-integrated FAQ system using FastAPI, PostgreSQL, and Angular**, automatically generating and managing course FAQs from office hour tickets with **OpenAI GPT-4o**, reducing duplicate questions and streamlining student support.
- **Developed backend services and RESTful APIs** for FAQ CRUD with role-based access control, and integrated them into the frontend with Angular signals and Material UI.
- **Improved student and instructor efficiency by surfacing relevant FAQs** during ticket submission and enabling real-time updates, helping students resolve common issues faster and reducing repetitive instructor workload.

Computer Science for Social Good

Aug. 2023 – Aug. 2024

Software Engineer Intern

- Optimized backend queries for a **10,000+ record PostgreSQL database**, reducing retrieval latency by **40%** through query refactoring and indexing strategies.
- Automated data-driven onboarding for **200+ users** using **Google Firebase**, cutting setup time by **60%** and standardizing account configuration across departments.
- Facilitated weekly cross-functional syncs to align engineers, designers, and analysts, reducing miscommunication and accelerating feature rollout.

PROJECTS

Tax Optimization Web App | *Python, Flask, AWS Bedrock*

- Developed a **web application** to calculate state tax-exempt portions of mutual fund dividends, eliminating **100%** of manual lookup time via automated data extraction and transformation for 300+ funds.
- Designed a **RESTful API** integrated with **AWS DynamoDB** to serve real-time financial data and refund rates, supporting concurrent queries with sub-200ms latency.
- Integrated **Bruno** for API testing and leveraged **AWS Bedrock** to call **Anthropic's Claude model**, enabling an AI advisor that delivers personalized tax guidance based on portfolio data and efficiency metrics, reducing planning time by 50%.