

Nishanth Alladi

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Professional Summary

Artificial Intelligence Engineer with a proven track record of excellence at Capital One and UIUC. Delivers intelligent, resilient, and scalable software that integrates real-world context into cohesive AI experiences.

Education

University of Illinois at Urbana-Champaign (UIUC)

- **MS, Computer Science + Data Science (2025)**
 - **Othello AI** | Python, Tree Search AI, Bit Manipulation
 - Uses a bitmap board with alpha-beta pruning and an opening book
 - **Self-Driving Raspberry Pi Car** | Python, Graph Traversal AI, Raspberry Pi
 - Developed with Python using cameras, ultrasonic sensors, and the A* algorithm.
- **BS, Computer Science + Philosophy (2022)**
 - Completed BS in 2 years

Thomas Jefferson High School for Science and Technology

Professional Experience

Capital One | Software Engineer (Aug 2022 - Sep 2024)

- **Tessera** | Python, Serverless AWS (Lambda, Glue, S3, SNS, SQS DynamoDB, VPC), Apache Kafka, Spark
 - **Backend platform for 50K+ daily marketing requests across Capital One**
 - Designed, developed, and deployed multiple AWS Lambdas to orchestrate workflows, using S3 for intermediate data interchange, Databricks with Spark for parallel comparison of resulting big data, and an automated email script for immediate feedback of the system's functionality
 - Reduced production incidents by 80%, saving the business an estimated \$180,000 a year in labor costs
 - Led migration efforts, collaborating with multiple development teams, QA, and business to ensure equivalence, resilience, and scalability of the new system under production traffic loads
 - Architected a real-time simulation framework which mirrored over 300k production requests a month from a legacy system in a next-gen serverless messaging architecture (Lambda, SQS, S3, Kafka), enabling risk-free validation ahead of production cutover. Worked with interns as a lead to complete development.
 - Pioneered an architecture diagram with 50+ components showing the end to end flow of data through the app
- Developed a set of API connections for a credit card rewards frontend microservice, enabling support for no preset spending limit customers.
- Selected as a representative for Capital One in mentorship for two consecutive summers, conducting workshops and personalized guidance for 34 interns to achieve a 100% project completion and return offer rate.

UIUC Freshman Honors CS | Course Instructor (Jan 2021-May 2022)

- Fully student-run course where an upperclassmen mentor leads a group of 5 freshman students in completing a project
- Mentored 20 students across 4 project teams, guiding them through creating full-stack applications in Django and React, incorporating Agile development with formal code reviews to complete and demo a working app in 10 weeks.

Consilio | Software Engineering Intern (June-July 2022)

- Developed an automated invoice creation and maintenance app in Django, integrating structured decision-tree logic to dynamically update fields and route legal case documents based on document type and metadata.
- Reduced processing time and repetitive manual labor tasks for legal case tracking, saving lawyers and paralegals 10+ hours per week.

Cubic Corporation | Software Engineering Intern (July-Sep 2021)

- Developed and optimized fare collection software, supporting seamless daily operations for the Boston Metro (MBTA).
- Designed and implemented an end-to-end fare dispute collection feature in Spring Boot with Postgres, including REST controller, service layer, data model, and unit/integration tests, resulting in faster dispute times and less manual triage

Technical Skills

- **Programming Languages:** Python (Advanced), Java, R, SQL, JavaScript
- **Frameworks/Libraries:** Django, FastAPI, Flask, Pandas, NumPy, Spring Boot, Databricks, Spark, Kafka, Postgres
- **Certifications:** AWS Solutions Architect Associate