

# Vedant Amin

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## EDUCATION

### Georgia Institute of Technology

Bachelor of Science & Master of Science in Computer Science

December 2024

Atlanta, GA

- Relevant Courses: Data Structures & Algorithms, Object-Oriented Programming, Database Systems, Computer Organization & Programming, Artificial Intelligence, Machine Learning, Computer Vision, Computer Networking

## EXPERIENCE

### Amazon

March 2025 – Present

Seattle, WA

Software Development Engineer

- Developed and maintained AWS infrastructure (ECS, S3, DynamoDB, API Gateway, ELB, VPC, CloudWatch) using Infrastructure as Code to support highly available, scalable production services
- Migrated Tier-1 payment processing APIs from legacy systems to AWS-managed services, redesigning traffic routing and scaling to reduce latency by 40% and eliminate 30+ days of manual operational effort
- Led the implementation of Amazon Shipping's General Rate Increase by designing and deploying pricing logic across backend services, driving over \$25M in incremental annual revenue
- Implemented stress testing and chaos experiments using AWS Fault Injection Service to simulate traffic spikes and infrastructure failures, validating system resilience and improving production reliability

### Amazon Web Services (S3)

June 2024 – August 2024

Seattle, WA

Software Development Engineer Intern

- Designed and implemented an automated integration testing workflow for large-scale decommissioning processes, reducing manual host selection and validation effort by 70%
- Enhanced backend decommissioning workflows using AWS Step Functions to branch prior to reprovisioning, enabling safe pre-production testing and reducing test setup time from 2–3 days to under 4 hours
- Developed internal tooling to orchestrate and validate multi-step infrastructure workflows on dedicated test environments, significantly reducing testing turnaround time
- Implemented Amazon CloudWatch alarms and monitoring to detect workflow failures during pre-production testing, improving reliability and reducing undetected errors

### Georgia Tech Research Institute (Automotive LiDAR Team)

August 2021 – May 2023

Atlanta, GA

Undergraduate Student Researcher

- Developed an automotive LiDAR perception system using ROS 2.0 and Python, enabling real-time sensor data processing, obstacle detection, and collision avoidance
- Implemented SLAM algorithms for autonomous navigation, achieving 65% mapping accuracy and localization precision within a 2 cm margin
- Optimized sensor wiring and mounting configurations, reducing signal interference by 45%
- Collaborated with hardware, software, and controls teams to integrate perception and navigation modules, improving vehicle responsiveness by 15%

### KemNu Inc.

June 2021 – August 2021

Atlanta, GA

Software Engineer Intern

- Developed React Native and React.js frontend for an event-driven mobile and web application
- Integrated Firebase Realtime Database, reducing response latency by 38% and supporting hundreds of users
- Implemented event registration and group chat features used by 50+ organizations and 800+ users

## PROJECTS

### NBA MVP Predictor | Python, Pandas, Scikit-learn, Matplotlib, Git

January 2023

- Implemented scikit-learn models on scraped NBA data to predict top-5 MVP candidates with 85% accuracy

### Travel Advisor | React.js, Material UI, AWS Amplify, Git

July 2022

- Developed a React.js travel advisor app with Google Maps & Places APIs, deployed on AWS Amplify

## TECHNICAL SKILLS

Programming Languages: Java, SQL, Python, JavaScript, HTML, CSS, C/C++

Technologies: AWS, React.js, NumPy, Pandas, Node.js, Flask, Git, Docker, Google Firebase, Linux, React Native