

Michael Zuo

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EDUCATION

Georgia Institute of Technology	Atlanta, GA
<i>B.S./M.S. in Computer Science, B.S. in Mathematics – GPA: 4.0/4.0</i>	May 2027
<ul style="list-style-type: none">Relevant Coursework: Data Structures & Algorithms, Systems & Networks, Artificial Intelligence, Databases, Machine Learning, Software Engineering, Computer Architecture, Object-Oriented DesignAwards: 2025 GT Competitive Programming Contest Finalist, AIME 4x Qualifier, USA Physics Olympiad Semifinalist	

EXPERIENCE

Amazon	May 2025 – Aug. 2025
<i>Software Development Engineer Intern</i>	Bellevue, WA
<ul style="list-style-type: none">Cut business onboarding time by 90% (20 to 2 business days) by building a CI/CD-driven workflow automation system with a self-service form in Java, React, and TypeScriptAutomated deployment and integration pipelines with AWS Lambda and DynamoDB, replacing manual email processes with API-based verificationEnhanced operational visibility across 100+ business organizations by implementing AWS CloudWatch alerts, reducing incident resolution time by 40% and strengthening system reliability	
Emory School of Medicine	Sep. 2025 – Dec. 2025
<i>Software Engineering Intern</i>	Atlanta, GA
<ul style="list-style-type: none">Developing an offline-capable REDCap data collection system using Service Workers and IndexedDB to enable healthcare staff to record patient data in rural Georgia without reliable internetImplementing a client-server architecture with RSA-AES encryption to ensure end-to-end HIPAA compliance, securing sensitive health records during offline storage and synchronized transmission	
College of Computing at Georgia Tech	Jan. 2025 – Present
<i>Head Teaching Assistant - Algorithms</i>	Atlanta, GA
<ul style="list-style-type: none">Design and publish algorithms assignments and solutions for 300+ students, aligning with course learning goals and strengthening understanding of graph theory, dynamic programming, and time complexity analysis	

PROJECTS

Poker Strategy Evaluation Engine <i>Python, FastAPI</i>
<ul style="list-style-type: none">Built a backend system to evaluate poker hands against over 1000 simulated opponent ranges per request with sub-200ms response times, exposed with a schema-validated FastAPI serviceDesigned a reproducible decision pipeline that computes hand strength and recommendations, validated through unit tests and structured logging to support debuggable analysis
WanderSync Travel App <i>Java, Android Studio, Firebase</i>
<ul style="list-style-type: none">Built a travel coordination app for over 300 Georgia Tech users, leading a cross-functional developer teamShipped over 20 features, including vacation planning, ridesharing, and scheduling toolsIncreased backend performance by 25% through optimized Firebase data modeling and query design
Spotify Trend Prediction Engine <i>Python, PyTorch</i>
<ul style="list-style-type: none">Achieved 75% forecast accuracy on 100k+ Spotify tracks using PyTorch-based ML forecasting modelsDesigned a scalable pipeline to process Spotify streaming data, enabling prediction of song popularity and trend shifts

TECHNICAL SKILLS

Languages: Python, Java, C++, C, JavaScript, TypeScript, SQL, HTML/CSS, XML
Frameworks: React, Next.js, Node.js, Django, Flask, Spring Boot, REST APIs, Nginx, Android Studio
Databases: MySQL, PostgreSQL, MongoDB, Firebase
Cloud & Tools: AWS (Lambda, DynamoDB, CDK, EC2, S3, ECS, CloudWatch), Docker, Linux, Git/GitHub, CI/CD, JUnit, Jest
AI & ML: PyTorch, TensorFlow, Scikit-learn, XGBoost, OpenCV, Machine Learning, Deep Learning