

Ridwan Amin

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EDUCATION

University of Texas at Dallas
Bachelor of Science in Computer Science

May 2026
GPA: 3.95

EXPERIENCE

Amazon Web Services

May 2025 – August 2025

Software Development Engineering Intern - EC2 Elastic Load Balancing

Seattle, WA

- Designed a pub-sub **asynchronous workflow data publishing service** to handle Elastic Load Balancing API event data handling.
- Reduced an internal transactional database load with the new system by **40%**
- Developed a new topic for publishing asynchronous event data for continuous subscription by the workflow service, allowing ELB provisioning events constantly in real time
- Created shared libraries for data-layer integrations (**DynamoDB caching, MySQL replicas**) to support scalable async workflows across ELB services

Fannie Mae

June 2024 – August 2024

Software Engineering Intern - Underwriting Core and Collateral Data Technology

Plano, TX

- Developed REST API endpoints interfacing with **AWS S3** and **DynamoDB**, reducing retrieval time by **10%** and improving accuracy by **5%** for Fannie Mae's Credit APIs and AWS cloud infrastructure
- Wrote **JUnit** tests with **Mockito**, achieving over **90%** test coverage
- Technologies Used:** Spring Boot, Open API, Swagger UI, AWS (S3, DynamoDB), Java, Terraform, Jenkins

UTD Networking Lab

August 2024 – Present

Undergraduate ML Researcher

Richardson, TX

- Built scalable ML models for network intrusion detection, optimizing anomaly detection and reduced false positives
- Facilitated extraction and processing of over **1,000** network traffic data points, improving threat detection efficiency by **30%** for real-time DDOS detection

PROJECTS

HackUNT Winner - FinTech | *React.js, Flask, Plaid API, OpenAI API*

- An AI-powered budgeting app built using the **Plaid API** and a supervised learning model to provide Texas teachers with personalized financial insights
- Built an AI chatbot with **OpenAI API** to offer tailored budgeting and investment advice with a **React.js** and **Flask** interface

ACM Projects Winner - CatchUp | *Flutter, Firebase, FFmpeg API*

- Developed a mobile social media app, facilitating unique daily video montages for enhanced user interaction
- Used **Flutter** to build an interactive and user-friendly UI and **Firebase** to develop a relational database

Pilot | *React.js, MongoDB, Vertex AI*

- Gathers small business information from small businesses, analyzes the answers to develop a risk score, and provide personalized insurance recommendations.
- Leverages **Vertex AI** on **Google Cloud** and machine learning to analyze answers and provide user recommendations

LEADERSHIP

HackUTD

February 2024 – Present

Industry Director

- Lead 30 officers organizing and running the **largest** Hackathon in the US with over **1,000** participants
- Organized sponsor communication, logistics, sponsor challenges, booths, and promotional materials

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL, JavaScript, HTML/CSS, Dart, MIPS Assembly

Frameworks/Tools: React, Node.js, Flask, Spring Boot, JUnit, Mockito, Swagger UI, OpenAPI, AWS, Pandas, NumPy, Git, Postman, Gradle, Jenkins, Terraform