

Mohammad Rafay

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EDUCATION

Texas A&M University

Bachelor of Science in Computer Engineering

College Station, TX

December 2025

CERTIFICATIONS

CompTIA IT Fundamentals+

May 2021

Texas Property and Casualty Insurance License

September 2021

EXPERIENCE

Software Engineer

Norstella

January 2026 – Present

Richmonad, Texas

- Designed and implemented scalable backend services using Java and Spring Boot, developing RESTful APIs to support secure, high-volume healthcare data ingestion and processing.
- Built and optimized data access layers using SQL, improving query performance, transaction reliability, and data consistency across distributed systems.
- Collaborated in an Agile environment to integrate Spring Boot microservices with cloud infrastructure, implementing logging, exception handling, and unit testing to enhance system reliability and maintainability.

Software Quality Automation Engineer - Internship

Apple Inc.

January 2025 – June 2025

Cupertino, California

- Designed and implemented automated test scripts in Python and Swift for full-stack applications to validate UI workflows, APIs, and database interactions, improving test efficiency and release stability in a software's development lifecycle.
- Triaged and debugged software issues across frontend and server-side applications, improving system performance, resolving critical bugs, and ensuring stable software releases.
- Built and optimized test frameworks to streamline automation pipelines, integrate results into CI/CD reporting cycles, and collaborated cross-functionally in an Agile environment to define test requirements, execute automated/manual test cases, and deliver actionable reports.
- Performed functional, regression, and performance testing to validate release quality and responsive UI design experience to ensure seamless software integration.

Software Engineer - Internship

Y-12 National Security Complex

May 2024 – January 2025

Oak Ridge, Tennessee

- Built an interactive route planning simulation using Cesium, Unity, and C#, allowing users to dynamically create the most efficient routes for transporting nuclear materials while ensuring maximum security.
- Implemented cybersecurity policies to strengthen the software for the company's alarm response training, enhancing the facility's protection against imminent threats by 40%.
- Accelerated training throughout the organization by 20% developing modules to counteract cyber threats in resource transportation.

Cybersecurity Engineer - Internship

Texas Department of Transportation

May 2023 – August 2023

Austin, Texas

- Maintained Security Policy content for compliance and accuracy throughout the organization.
- Conducted Third Party Risk Management assessments for enhanced protection of management systems.
- Utilized KQL within Microsoft Azure, to analyze research metrics, supporting data-driven decision-making and strategy formulation.

PROJECTS

BluStick | TypeScript, JavaScript, Swift, C++, SQL

August 2025 - December 2025

- Developed a hardware-software system that collects Bluetooth signals from distributed sensors, performs real-time triangulation, and visualizes device locations on an interactive and responsive cross-platform user interface.

LED Matrix Camera Display | Python

January 2024 - May 2024

- Built an interactive LED matrix system that streams live webcam input and button-triggered patterns, validating UI responsiveness and ensuring seamless interaction between input devices and visual output.

Point-of-Sale System | TypeScript, JavaScript, Java, HTML, React

January 2024 – May 2024

- Designed and implemented a Point-Of-Sale system for a restaurant that allows for an interface for employees, managers, and cashier pages to communicate together.

Dynamic Image Resizer | C++

November 2022

- Implemented an efficient algorithm in C++ for dynamic image resizing, preserving content integrity, and optimizing storage use.

Web Development | HTML, CSS, JavaScript

August 2020 - Present

- Delivered bespoke website solutions for small businesses, enhancing online presence and customer engagement.

SKILLS

Languages/Tools: Python, C++, C#, Java, Swift, TypeScript, SQL, HTML, CSS, JavaScript, PostgreSQL, Haskell

Technologies: SpringBoot, Xcode, Microsoft 365, Unity, VS Code, IntelliJ, JIRA, Radar, DBeaver, Postman

Soft Skills: Project Management, Team Leadership, Problem Solving, Analytical Thinking, Scrum Master, Software Development Lifecycle, Test Automation, UI/UX Design

LEADERSHIP POSITIONS

President | Honors Society for Electrical & Computer Engineers (HKN)

June 2023 – January 2025

Corporate Chair | Honors Society for Electrical & Computer Engineers (HKN)

January 2023 – June 2023