

# Mohd Ramzan

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## EDUCATION

### University of Washington

Bachelor of Science in Computer Science and Mathematics

September 2024 – June 2027

- **GPA:** 3.71

- **Selected Coursework:** Data Structures, Algorithms, Data Management, Artificial Intelligence, Computer & Network Security, Discrete Math I & II, Linear Algebra, System & Software Tools, Hardware Software Interface

### Carnegie Mellon University

- **GPA:** 3.9

August 2023 – May 2024

## TECHNICAL SKILLS

Languages: Java, Python, JavaScript, Scala, TypeScript, PostgreSQL, MySQL, DynamoDB, MongoDB, C, C#, HTML5/CSS

Frameworks/Libraries: Node & Express.js, Flask, React, Slick, OpenCV, PyTorch, Pandas, Numpy

Developer Tools/Misc Skills: Git, Docker, AWS, Kubernetes, Azure, Heroku, CRON, Shell, Linux, OOP, REST APIs

## EXPERIENCE

### Software Engineering Intern - Capital One

June 2025 – Aug 2025

*Internship*

- Halved processing times by writing asynchronous streaming and functional code in Scala and Akka to enable multithreaded computation and load balancing based on demand.
- Designed and implemented internal facing APIs that reduced code redundancy in the company by providing a unified bond trading backend.
- Optimized bond trader workflow by tracking monthly balances and targets in their native application.
- Leveraged agile processes to incorporate end user feedback into designs on a weekly release schedule.

### Software Developer Intern - Quad

June 2024 – Aug 2024

*Sussex, Wisconsin, United States*

- Shortened customer onboarding time by efficiently mapping external print codes to internal print codes.
- Prevented the loss of customer data by rewriting book order entry forms to have auto-save functionality.

### Undergraduate Teaching Assistant

Sept 2024 – Present

*Paul G. Allen School of Computer Science & Engineering*

- TA CSE 123, the **600 student**, final intro series CS course, teaching students about OOP, linked lists, binary trees & recursion.
- Teach & help plan 1-hour sections 2x weekly to 21 students, hold office hours to debug code, grade approx. 20 assignments per week.

### Software Lead - University of Washington Underwater Robotics

Sept 2024 – Mar 2025

*Student Organization*

- Oversaw software development in Python & Godot for the 2024-2025 season. Architected & developed code on Linux, leading autonomous motion development. Led **10-member** software team & helped manage **40+ member** org.
- Using Python & PyTorch, created a CV project to detect and classify organisms for the 2024 MATE ML competition, placing **2nd nationally**.

## RESEARCH

### Undergraduate Research Intern - Makeability Lab

Sept 2024 – Present

*University of Washington*

- Working under Professor Jon Froehlich & Lead Engineer Michael Saugstad on Project Sidewalk, a web app which collects computer vision labels from over **10,000 users**, which Google Maps uses for route creation. Maintain the app and its related APIs.
- Full stack dev in JavaScript, Scala (Slick framework) & PostgreSQL, now mainly resolving backend tickets & pushing to production weekly.
- Developed features to simplify users' experience labeling sidewalks. Created APIs for tables collecting complex user data.

### Undergraduate Research Assistant

Jan 2025 – Mar 2025

*University of Washington*

- Co-authored paper regarding strategies to help developers create more accessible data visualizations for the blind. Worked with PhD student Ather Sharif & Dr. Jacob Wobbrock. Submitted paper to Assets 2025 & awaiting publishing.
- Conducted literature reviews, helped design and analyze interviews & surveys, contributed to paper writing.

## PROJECTS

### Producers-Forte | *JavaScript, Node.js, React.js, Python, Flask, PyTorch, Docker*

Sep 2024 – Nov 2024

- Built & trained **deep CNNs** with PyTorch to predict traits about songs, helping producers create similar sounds.
- Created a Flask server for the app. Wrote frontend in React. Containerized the application with **Docker**.
- Created/managed dataset of over **10,000 songs** and wrote Python scripts for data manipulation & audio processing.
- Deployed the application for public use and integrated API endpoints for real-time music analysis.

### Bhaghini | *Java, Spring Boot, React.js, PostgreSQL, JWT*

Nov 2024 – Feb 2025

- Built full-stack e-commerce site showcasing Bengali heritage clothing using React and Spring Boot.
- Implemented user login with JWT, product search, cart, checkout. Added shop creation for sellers with image uploads.
- Used React Context API and Spring Boot with JPA/Hibernate for backend data management.

### Personal Website | *JavaScript, React.js, Python, Flask, CSS*

May 2025 – Jun 2025

- Built responsive portfolio website using React with dynamic UI features including animated text transitions, smooth scrolling navigation, and modern gradient-based design. Structured with reusable components showcasing professional experience and technical expertise.