Asif-Ul Islam

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Education

Northeastern University — Arlington, VA
MS in Computer Science — *Jan 2024 – May 2025*

Middlebury College — Middlebury, VT
Bachelor's in Computer Science and Molecular Biology & Biochemistry — *Aug. 2019 – May 2023*

Experience

Machine Learning Graduate Teaching Assistant — January 2025 – Present
Northeastern University, Khoury College of Computer Sciences — *Arlington, VA*

- Graded assignments to ensure fairness and accuracy while providing constructive feedback to students.
- Assisted students with mathematical concepts in linear algebra and multivariate calculus critical to understanding machine learning algorithms.
- Verified and tested Python-based programming assignments to maintain academic rigor and course standards.
- Debugged code with students during office hours, enhancing their understanding of problem-solving techniques and debugging skills.

Full-Stack Software Engineer Intern — June 2023 – December 2024
Mastex Promowear — *Remote*

- Streamlined the ordering process for ready-made garments by conceptualizing and implementing a full-stack website for product display and order management, enhancing workflow efficiency.
- Developed the platform using React.js and Tailwind CSS for the frontend, with MySQL and Prisma on the backend, and integrated Auth0 for secure user authentication.
- Enabled users to browse products, request samples, and receive price quotations with optimized efficiency, expediting order processing time by 50% and increasing orders received by 20%

Undergraduate Research Assistant — June 2022 – August 2022
Middlebury College, Department of Computer Science — *Middlebury, VT*

- Collaborated on a research project led by Professor Ananya Das, focusing on the offline Dial-a-Ride problem to optimize request scheduling in ride-sharing systems.
- Implemented k-Sequence, an algorithm that serves the fastest set of k requests, and analyzed its approximation ratio to understand its performance on weighted graphs.
- Built a full-stack ride scheduling platform using Django and SQL, providing real-time insights into ride information for dispatchers, significantly enhancing operational efficiency.
- Improved the algorithm's performance by 50% in driver utilization and reduced ride request processing time by 70%.

Software Development Intern — June 2021 – August 2021
Perry Institute for Marine Science — *Waitsfield, VT*

- Enhanced production of 3D models for coral reef environments using photogrammetry.
- Engineered a Python program that automated the execution of Metashape, reducing setup time from 30 minutes to a single command line prompt.
- Increased efficiency by 40%, enabling more rapid and accurate creation of 3D models from 2D photographs.

Web Development Intern — June 2020 – August 2020
Knitline Group — *Remote*

- Developed a website to enhance the production order process for ready-made garments.
- Devised a system for product display and detailed order processing, including sample requests, estimated time, price quotations, and delivery details.
- Improved order processing efficiency by 30% and boosted the number of orders received by 20%.

Projects

ReviewIt | *React, Tailwind CSS, MongoDB, Auth0, Prisma* — May 2024 – August 2024

- Developed a full-stack review management platform using React.js, Prisma, and Auth0 for real-time user feedback and business scoring.
- Reduced data retrieval times by 40% with optimized MongoDB schema design and improved user interaction by 20% with Google Maps API integration.

Metro Finder | *Kotlin, Google Maps API, Jetpack Compose* — May 2024 – August 2024

- Built a transit app using Kotlin and Google Maps API to provide optimized transit options, reducing search time by 25%.
- Leveraged MVVM architecture for efficient lifecycle management and seamless navigation.

Anomaly Detection in Healthcare Data | *Python, Scikit-learn, NumPy, Pandas* — March 2024 – May 2024

- Designed an anomaly detection model using Python and scikit-learn, achieving 20% higher accuracy in identifying abnormal patterns..
- Applied PCA, K-means clustering, and Binary encoding for unsupervised learning on a healthcare dataset.

Technical Skills

Languages: Java, Python, Kotlin, MySQL, JavaScript, HTML, Tailwind CSS, R, MATLAB
Tools: React, Node.js, JUnit, Jetpack Compose, Prisma, Auth0, scikit-learn, pandas, NumPy, Matplotlib, TensorFlow