# Asif-Ul Islam

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## Skills

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

## Experience

**Machine Learning Graduate Teaching Assistant,** Northeastern University January 2025 - Present
- 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,** Mastex May 2023 - August 2023
- 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%.

**Research Assistant,** Middlebury College Department of Computer Science June 2022 - August 2022
- 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,** Perry Institute for Marine Science June 2021 - August 2021
- 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,** Knitline Group June 2020 - August 2020
- 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

**Review It**
- 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**
- 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 Set** https://github.com/asifaxif/DS5230_Project
- 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.

## Education

**Northeastern University** – MS in Computer Science December 2025
**Middlebury College** – BA in Computer Science and Molecular Biology & Biochemistry May 2023