

Mithun Dineshkumar

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Education

Northeastern University, Boston

Master's in Science Computer Science

Expected – Dec 2026

Rajalakshmi Engineering College, Chennai

Bachelor's in Engineering in Computer Science

March 2024

Technical Skills

Languages: Java , Javascript , Python , R , C# , MySQL , Kotlin

Technologies/Framework: .NET, AWS , JUnit , VueJS , Tailwind , React , MongoDB, Git , MEVN

Libraries: TensorFlow , Keran , PyTorch , SciKit-Learn , Pandas , NumPy , OpenCV , Matplotlib

Experience

Rajalakshmi Engineering College - Chennai

Teaching Assistant - C++

July 2023 – Aug 2023

- Mentored juniors by teaching complex C++ programming and data structures and algorithms (DSA) concepts and debugging.
- Enhanced student success by increasing the pass rate from 40% to 60%, helping students pinpoint and correct logical and structural issues in their code, building a foundation for technical growth.

Acmegrade - Chennai

Intern

Oct 2021 – Dec 2021

- Leveraged Python libraries like Pandas, NumPy, Matplotlib, and Scikit-learn to perform comprehensive data analysis on datasets with 100,000+ records of various signatures and implemented an advanced signature verification model in Python with 90%+ accuracy.
- Enabled automated verification processes, reducing manual review time by over 80% and providing a scalable solution for high-volume signature validation with enhanced operational accuracy.
- Improved retention and comprehension rates by providing a hands-on learning tool., making complex concepts more accessible and fostering a deeper understanding of scientific subjects.

Projects

Accent Classifier - [Accent-Classifier.git](#)

- Trained a CNN-based model to classify English accents with 92% accuracy using a dataset of 10,000+ audio samples, improving accent recognition and understanding of linguistic diversity in speech processing.
- Conducted comprehensive data pre-processing, including noise reduction, feature extraction, and normalization of audio samples, ensuring high-quality input for the model and enhancing its performance and reliability in real-world applications.

Real-Time Helmet Detection - [Helmet-Detection.git](#)

- Developed a YOLO-based helmet detection model with 95% accuracy, integrated into a Django web app for real-time detection at 30 FPS, improving road safety by monitoring helmet use on a dataset of 20,000+ images.
- Integrated it with a cloud-based monitoring using Raspberry Pi3 and alert system to analyze data from multiple detection points, aiming to reduce road accidents and promote helmet compliance, particularly in high-risk regions.

AR Education App - [AR-Study-App.git](#)

- Engineered an interactive application featuring 3D models of key educational concepts, including the human heart, plant biology, and jet engines, designed to enhance engagement and the learning experience. through immersive visualization.

Publications

D. Mithun (2023) "Object Detection using Learning Algorithm and IoT," 2023 International Conference on Research Methodologies in Knowledge Management, Artificial Intelligence and Telecommunication Engineering, Chennai, India, 2023, pp. 1-6

D. Mithun (2024) "A Novel Approach to Educational Augmented Reality: Real-Time Enhancement and Interactivity," 2024 Third International Conference on Intelligent Techniques in Control, Optimization and Signal Processing (INCOS), Krishnankoil, Virudhunagar district, Tamil Nadu, India, 2024, pp. 1-6