

VISHAQ JAYAKUMAR

📍 Boston, MA 📞 (+1)-857-7469964 ✉️ jayakumar.v@northeastern.edu 🌐 vishq680 in vishaqjayakumar

EDUCATION

Northeastern University, Boston

Jan 2023 - May 2025

Master of Science in Computer Science

GPA: 3.66

Coursework: Programming Design Paradigm, Algorithms, Web Development, Database Management

Sri Sivasubramaniya Nadar College of Engineering, Chennai

Aug 2018 - Apr 2022

B.Tech, Information Technology

GPA: 3.78

Coursework: Data Structures, Algorithm Analysis and Design, DevOps, Object Oriented Programming

SKILLS

Programming Languages:	C/C++, Python, JavaScript, Java, C#, TypeScript, SQL, Swift, MATLAB
OS and Database:	Windows, Linux, MacOS, MySQL, MongoDB, Postgres, SQLite, Firebase
Web Technologies:	HTML, CSS, React, Angular, Django, Node, Bootstrap, REST API, Express, JQuery
Developer Tools:	Git, Pandas, JIRA, JUnit, AWS, CI/CD, Postman, Tensorflow, Pytorch, IOS SDK

WORK EXPERIENCE

Aura Intelligent Systems, Boston

Sept 2024 - Dec 2024

Machine Learning Intern

- Streamlined nuScenes dataset access using Python APIs for faster training workflows.
- Optimized lightweight object detection model for AMD Versal AI Engine using Python/C++, reducing processing latency by 25% and enabling real-time object detection.
- Converted raw TI AWR1243 radar data to point clouds using Python and MATLAB for perception and sensor fusion.
- Developed radar preprocessing filters and clustering algorithms to enhance ADAS object detection.

LARSEN & TOUBRO (L&T), Chennai

Apr 2021 - May 2021

Software Engineering Intern

- Built a real-time dashboard with Angular and C#, enhancing UI responsiveness and backend integration.
- Implemented an efficient deployment pipeline using GitHub Actions, reducing deployment time by 60%.
- Analyzed application performance and optimized code design, boosting system efficiency by 10%.

PROJECTS

Image Manipulation Tool | GitHub

- Designed over 15 image transformation techniques and crafted a user interface using Java Swing.
- Improved code-base optimization by 30% through the application of the MVC architecture design pattern.
- Emphasized Test-Driven Development with JUnit, creating 60+ unit tests for extensive coverage.

Deep Learning based Spatio-Temporal Anomaly Detection in Videos | GitHub

- Developed a video classification model using a 3D CNNs to detect and classify video frames into 14 classes.
- Addressed class imbalance issues in the dataset and implemented data augmentation to improve model performance.
- Processed and analyzed a large-scale dataset of 16,000+ surveillance video clips using TensorFlow and OpenCV.

Computer Vision System for Camera Calibration and Augmented Reality | GitHub

- Implemented real-time camera calibration and 3D visualization using OpenCV, C++, and STL containers.
- Developed vision pipeline with Harris corner detection, chessboard pattern recognition, and sub-pixel corner refinement.
- Created AR application rendering 3D primitives with real-time perspective projection and distortion correction.

Gym Buddies App | GitHub

- Constructed a mobile app for gym enthusiasts using SwiftUI, enabling connections based on shared workouts.
- Integrated Google Firebase for backend services, including Firestore and FirebaseAuth for database and authentication.
- Developed a real-time chat system with custom chat cells and optimized data fetching, reducing load times by 30%.

RESEARCH PUBLICATION

Covid-19 detection using chest X-rays: CNN as a classifier vs CNN as a feature extractor | [GitHub](#) | [Paper](#)