VISHAQ JAYAKUMAR

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EDUCATION

Northeastern University, Boston   *Jan 2023 - May 2025(Expected)*
Master of Science in Computer Science
Coursework: Programming Design Paradigm, Algorithms, Web Development, Database Management, UI/UX Design

Sri Sivasubramaniya Nadar College of Engineering, Chennai   *Aug 2018 - Apr 2022*
B.Tech, Information Technology
Coursework: Data Structures, Algorithm Analysis and Design, DevOps, Object Oriented Programming

SKILLS

Programming Languages:	C/C++, Python, JavaScript, Java, C#, TypeScript, SQL, Swift
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

LARSEN & TOUBRO (L&T), Chennai   *Apr 2021 - May 2021*
Software Engineering Intern
- Developed and tested a dashboard user interface using Angular and C#.
- Implemented a CI/CD pipeline, optimising development workflows by 20%.
- Monitored application performance and recommended code design improvements, achieving a 10% performance boost.

Verzeo, Banglore   *Jan 2020 - Feb 2020*
Machine Learning Intern
- Contributed to the development of a non-invasive prediction model for brain cancer patients.
- Implemented a pre-trained model to achieve 85% accuracy in classifying MGMT promoter methylation status.
- Employed 5-fold cross-validation to ensure model robustness and prevent overfitting, improving model reliability.
- Optimized model performance with early stopping and learning rate scheduling, increasing accuracy by 10%.

PROJECTS

Image Manipulation Tool | **GitHub**

- Implemented over 15 image transformation techniques and constructed a dynamic 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.

Roomies - Web Application | **GitHub**

- Developed a Student-Connect App for international students, enabling seamless communication and collaboration.
- Implemented backend functionality using NodeJS, ExpressJS, and PostgreSQL for API requests, database operations, and user authentication.
- Built a React front-end for users to search universities, access student information, and establish connections.

Gym Buddies App | **GitHub**

- Developed 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.
- Implemented 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**

Author   *May 2021 - Aug 2021*
- Implemented custom CNN architecture and utilized intermediate feature representations for additional training.
- Conducted extensive hyperparameter tuning and cross-validation for various classifiers, achieving 96% accuracy.
- Presented a paper at the 2nd International Conference on Machine Intelligence and Smart Systems 2021.