

## EDUCATION

**Northeastern University, Khoury College of Computer Sciences, Boston, MA, USA**

Jan 2023 – Dec 2024

**Candidate for a Master of Science in Computer Science**

(GPA: 3.67/4.0)

Related Courses: Algorithms, Web Development, Program Design Paradigm, Artificial Intelligence, Machine Learning.

**Vellore Institute of Technology, India**

Aug 2017 – Sep 2022

**Master of Technology in Integrated Software Engineering**

(GPA: 9.34/10)

Related Courses: Web Development, Cloud Computing, Software Configuration Management, Mobile Application Development, Operating Systems and Data Analytics.

## TECHNICAL SKILLS

**Programming/Web Technologies:** JavaScript, Python, Java, HTML, CSS, JSP

**Framework/API:** React, Redux, RESTful APIs, Express, Node.js, Angular, JUnit, Material UI, Mockito, GraphQL, Spring, Hibernate, JDBC.

**Database/Cloud:** PostgreSQL, MongoDB, SQL, MySQL, Redis, AWS (EC2, CloudWatch, S3), Docker, Kubernetes.

**Data Science Libraries:** NumPy, Pandas, SciPy, Django, Flask, TensorFlow, Pytorch, OpenCV, Matplotlib, Hugging Face, XGBoost, Kafka.

**Version Control/Tools:** Git, Tomcat, Postman, Maven, Selenium, TestNG, SoapUI

**Operating Systems:** Linux, Unix, Windows

## WORK EXPERIENCE

**Backend Engineer - Intern, SHIASH | Chennai, India**

**Project: E-commerce Website | (Spring Boot, AWS, PostgreSQL, Redis, Docker, WebSocket)**

Oct 2021 – Mar 2022

- Contributed to the design of a scalable e-commerce platform, enhancing performance with **microservices**, **PostgreSQL optimization**, **Redis caching**, and high-throughput **API** development for improved deployment efficiency and transactional robustness.
- Implemented a **CI/CD** pipeline, utilizing **Docker** for containerization and **Jenkins** for automation, which cut deployment times by **84%** and significantly increased the frequency of new releases.
- Optimized **AWS infrastructure** for **high availability**, implementing **auto-scaling** groups and **load balancers** to efficiently manage **resource scaling**, achieving 99.7% uptime and maintaining **sub-second response** times during traffic surges.
- Implemented and maintained comprehensive **JUnit test** suites across microservices to ensure code **quality** and **stability**. This resulted in a **93%** success rate in first-time deployments and minimized post-deployment issues.

**Full Stack Engineer – Remote Intern, Sri Sigma Technologies | Toronto, Canada**

**Project: EdTech Website | (React, Node.js, AWS, RESTful APIs, Jest, TypeScript)**

Jan 2021 – Aug 2021

- Contributed significantly to the EdTech website architecture and designed RESTful APIs that improved data exchange efficiency by **40%** and bolstered system performance and reliability.
- Developed **client-side** interfaces using **React**, creating an interactive and responsive user experience. Combined with **TypeScript** for static typing, this approach ensured code maintainability and reduced errors by **25%**.
- Implemented event-driven backend services in **Node.js** and rigorously tested using **Jest** to maintain code quality, functionality and deployed on **AWS**, capitalizing on the cloud's scalable and resilient infrastructure.
- Enhanced **API endpoint** performance by employing optimization techniques, reducing latency and improving data handling efficiency. This effort significantly improved page loading times, cutting them by **54%**, thereby enriching the user experience across various web browsers.

## ACADEMIC PROJECTS

**Project: Caption Craft | (MERN, GraphQL, Machine Learning (GANs), Jest, TypeScript)**

Aug 2023 – Nov 2023

- Engineered "Caption Craft" with the **MERN** stack, blending AI-powered art generation (**GANs**) with user interaction, achieving a seamless **full-stack** experience.
- Leveraged **Redux** for state management and **Socket.io** for real-time communication, enhancing user experience and reducing server load by 38% through the integration of **Hugging Face APIs**.
- Integrated **social networking** features, including friend connections, by employing **GraphQL** for efficient data queries and developing **algorithms** for **friend recommendations** and an **advanced search** function for posts, significantly enhancing user engagement and interaction on the platform.
- Enhanced code reliability with **Jest** and **TypeScript**, integrating **asynchronous** testing to streamline development and reduce bugs.

**Project: Learning Management System (LMS) | (MERN, Docker, Redux, Socket.io, Cookies, Web Optimization)**

May 2023 – Sept 2023

- Developed a high-availability LMS on Docker, achieving **99.6%** uptime, highlighting system resilience.
- Implemented real-time messaging with **Socket.io**, improving application interactivity.
- Created **30+** RESTful API endpoints using **Express.js** and **MongoDB** for efficient content handling.
- Enhanced front-end performance using React.js and **Material UI**, leading to a **76%** improvement in page load times.
- Integrated an **NLP chatbot**, utilizing **cookies** for personalized user experiences.
- Applied advanced **caching**, asynchronous JavaScript, React **lazy loading**, and **WebSocket** for live updates, cutting latency by 55% and speeding up content delivery.