

Education

Northeastern University, Master's degree in Computer Science

Relevant Courses: Web development, Program Design Paradigm, Natural Language Processing

Boston, Massachusetts

Sep 2023 - Dec 2025 (Expected)

SRM Institute of Science and Technology, Bachelor's degree in Computer Science

Relevant Courses: Data structures and algorithms, Artificial Intelligence, Object Oriented Programming, DBMS

India

Jul 2019 - Jun 2023

Skills

Languages: Java, C++, Python, JavaScript, TypeScript, SQL, C#

Web Technologies: React, Node.js, Express.js, HTML, CSS, Redux, REST APIs, GraphQL

Databases & Cloud: MySQL, PostgreSQL, MongoDB, AWS, Docker, CI/CD

Core Competencies: Data Structures, Algorithms, OOP, System Design, Multi-threading, Agile, Git

Work Experience

IpserLab LLC

Boston, MA, USA

Software Engineer Intern

Jan 2025 - Jun 2025

- Developed quiz creation platform enabling customizable assessments with multimedia support using **ReactJS**, Java, and PostgreSQL, serving **50+ beta testers** across **3 educational institutions**
- Accelerated API response times **30% (800ms to 560ms)** through JDBC connection pooling and query optimization, processing **200+ daily requests**
- Implemented leaderboards and analytics dashboards with Chart.js for real-time data visualization, tracking metrics for **15+ active quiz sessions**
- Restructured database schema and optimized **12 SQL queries** reducing execution time **25%** while supporting **50+ concurrent user sessions**
- Enhanced frontend accessibility achieving **95+ Lighthouse score** and cross-platform compatibility by collaborating with UI/UX teams

Northeastern University

Boston, MA, USA

Graduate Teaching Assistant, Web Development

Jun 2024 - Dec 2024

- Instructed **60+ students** in full-stack web development (React, Node.js, Express.js, MongoDB, HTML, CSS, JavaScript) through **12 structured tutorials** and hands-on workshops
- Conducted code reviews of **200+ assignments** with **10 hours weekly** office hours, improving average assignment scores by **15%**
- Managed Piazza course forum (**200+ posts per semester**) and collaborated with faculty using Agile methodologies, reducing unanswered queries by **40%**
- Evaluated student projects using industry-standard software development practices, providing technical feedback on code quality and architecture

Internship Studio

Remote, IN

Web-development Intern

Jan 2022 - Mar 2022

- Built and deployed full-stack e-commerce platform with **15+ UI components** achieving **98% mobile responsiveness** and cross-browser compatibility
- Enhanced server performance through caching strategies, reducing page load time from **2.8s to 2.5s** and improving Core Web Vitals scores
- Integrated MySQL database with normalized schema managing **10,000+ product listings** across **8 tables** with secure authentication

Projects

Image Processing & Enhancement Application

Sept 2024 - Dec 2024

- Architected **Java-based** image processing system inspired by **Adobe Photoshop and GIMP**, implementing **7 algorithms** (blur, sharpen, sepia, greyscale, color correction, brightness, contrast) with **MVC** architecture across **25+ classes** and **3,000+ lines of code**
- Applied **7 object-oriented design patterns** (Adapter, Facade, Builder, Command, Decorator, Strategy, Visitor) reducing cyclomatic complexity by **35%** and achieving **90% test coverage** with **JUnit**
- Engineered multi-threaded system supporting **100+ concurrent operations** across JPG, PNG, PPM formats, reducing average processing time by **20%** (**500ms to 400ms** per image)

Kanbas React Web Application

Jan 2024 - Apr 2024

- Developed responsive educational platform inspired by **Canvas LMS** using React with **40+ reusable components** and Redux for state management, reducing initial load time from **3.2s to 2.7s** through code splitting and **lazy loading**
- Implemented scalable component architecture with **85% code reusability** across **2,000+ lines** and **60+ files** with consistent coding standards
- Built Node.js backend with Express.js implementing **15 REST API endpoints**, **JWT** authentication, and session management supporting **100+ concurrent users** during load testing

ECOM-VISION Admin Dashboard

Jan 2024 - Mar 2024

- Created data analytics dashboard for e-commerce operations using React, Material UI, and Nivo Charts, implementing **8 interactive visualizations** and **12+ UI components** for insights across **4 key business metrics**
- Refined Redux Toolkit state management reducing unnecessary re-renders by **45%** and improving Time to Interactive from **2.1s to 1.6s**
- Implemented Node.js and MongoDB data processing pipeline with **6 tuned aggregation queries** achieving **30% faster data retrieval** (**400ms to 280ms** average query time)