

# Mahip Parekh

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## EDUCATION

### Northeastern University, Khoury College of Computer Sciences

*Master of Science in Computer Science*

Boston, MA

Jan 2025 – Dec 2026

### Gujarat Technological University

*Bachelor of Engineering in Computer Engineering*

India

Jul 2019 – Jul 2023

## EXPERIENCE

### Full Stack Software Engineer

IDX India Pvt Ltd

Feb 2023 – Jan 2024

India

- Designed and deployed scalable B2B investor relations platforms serving millions of users globally, implementing **microservices architecture** and **cloud-native solutions** that directly impacted customer engagement and business outcomes.
- Built responsive, accessibility-compliant web applications using **React.js**, **Vue.js** and **Next.js**, ensuring cross-browser performance and WCAG adherence while improving usability and engagement among users, investors and analysts.
- **Collaborated with cross-disciplinary teams** including QAs, infrastructure engineers, and client managers in agile sprints, participating in code reviews, stand-ups, and technical discussions to drive solutions forward.
- Implemented performance optimizations such as **lazy loading**, **code splitting**, and server-side rendering with **Next.js** and webpack, reducing load time by **over 50%** and enhancing responsiveness, user experience, and SEO performance for investor portals.
- Maintained **operational excellence** by debugging complex **systems**, resolving deployment issues in real-time, and ensuring **fault-tolerant, cost-effective** solutions during critical business operations.

### Software Engineering Intern

Allsoft Solutions Pvt Ltd

Jun 2022 – Aug 2022

India

- Applied **supervised learning algorithms** including **linear and logistic regression** using **Python**, **Scikit-learn**, and **Pandas** to achieve **82% prediction accuracy** on customer churn datasets, enabling data-driven business decision-making.
- Engineered features and analyzed **50,000+ row datasets** using **NumPy** and visualization tools, reducing training time by **30%** while **quickly adapting to new technologies**.

## PROJECTS

### Kambaz - Learning Management System | React, Node.js, PostgreSQL, Kafka, RESTful APIs, WebSockets

- Developed full-stack web application replicating Canvas LMS, building **RESTful APIs** with **Node.js/Express** backend and **PostgreSQL** for managing courses, assignments, and real-time grade tracking for **500+ concurrent users**.
- Implemented **asynchronous processing** using **Kafka** and **SQS** for assignment submissions and notification delivery, ensuring reliable message handling in a fast-paced, high-throughput educational environment.
- Built responsive **React** frontend with real-time updates via WebSockets, iterating rapidly based on user feedback while leveraging **AI-assisted development tools** to maintain code quality and development efficiency.

### Blockchain-Based Distributed File Storage | Python, Go, DHT, Blockchain, Multi-Node Cluster

- Architected **decentralized file storage system** integrating **DHT-based peer-to-peer networking** with blockchain ledger for metadata integrity, distributing file chunks across multiple storage nodes with cryptographic verification using SHA-256 hashing.
- Built **scalable backend services** handling file chunking, distributed storage coordination, and blockchain transaction recording, deployed across multi-node cluster on Khoury Linux servers demonstrating real distributed system deployment.
- Implemented **fault-tolerant replication** and automated integrity verification that detects corrupted chunks through blockchain-recorded CIDs, ensuring data consistency and high availability even with node failures.

### Calendar Event Manager | Java, MVC, JUnit, Swing

- Designed an event management system handling **100+ concurrent events** using **MVC** and **design patterns** in **Java** by building a modular architecture which reduced coupling and enabled feature additions following the **open/close principle**.
- Created comprehensive desktop scheduling application with **Java Swing** featuring **conflict detection** and customizable calendar views, improving **workflow efficiency** and reducing scheduling conflicts.
- Established a robust testing framework achieving **98% code coverage** by implementing **200+ JUnit** unit testing test cases, including unit, integration, and **end-to-end tests**, which reduced production bugs by **80%** and ensured reliability across the system.

## SKILLS & CERTIFICATIONS

**Programming Languages:** Python, Java, C++, Go, TypeScript, JavaScript, Rust, C#, PHP, Shell Scripting

**Backend & Databases:** Flask, Node.js, Express, PostgreSQL, MySQL, MongoDB, SQLAlchemy, RESTful APIs, SQL, NoSQL

**Cloud & Infrastructure:** AWS (EC2, S3, RDS), Docker, Kubernetes, Microservices, CI/CD, Jenkins, RabbitMQ, Kafka, SQS

**Frameworks & Tools:** React, Next.js, Spring Boot, Git, JUnit, Maven, Agile/Scrum, Code Review, AI-assisted Development

## RELEVANT COURSES

Building Scalable Distributed Systems, Data Structures and Algorithms, Database Management Systems, Web Development, Machine Learning, Cloud Computing, Software Engineering, Object Oriented Programming