

SHIVAM MAHAJAN

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PROFESSIONAL EXPERIENCE

Software Engineer | Mindex | Rochester, New York

Oct 2023 – Present

- Spearheaded the development of critical front-end and back-end features using C# and .NET Core, introducing best practices such as separation of concerns and single responsibility, improving application performance by 15%
- Streamlined the deployment process and optimized documentation using Azure Pipelines, AWS ECS, EC2, and Confluence, cutting process time by 50% and enhancing stability for application deployments
- Pioneered the implementation of unit testing using NUnit and the Moq framework, establishing the initial testing infrastructure, discovering and resolving a critical bug impacting 16,000 users
- Architected an infrastructure with AWS CloudFormation and implemented serverless architectures using AWS Lambda, adhering to the fan-out pattern with SNS and SQS, resulting in a 20% reduction in critical errors
- Tech Stack: ASP.NET Core, C#.NET, AWS Lambda, CloudFormation, ECS, EC2, S3, RDS

Software Engineer Intern | Mindex | Rochester, New York

Jan 2022 – Aug 2022

- Engineered a billing management system with React.js and Python on AWS, boosting efficiency by 30% through streamlined payment processing
- Created a Dashboard Web App employing React.js for Front-end, Python for Back-end, AWS API Gateway, Lambda and RDS, empowering client to gain actionable insights, significantly reducing analysis time by over 50+ hours quarterly
- Resolved a critical bug in the backend infrastructure that blocked email communications, utilizing C# and AWS Cognito, restoring communication for over 50,000 users
- Enhanced login security by integrating AWS Cognito with C# and SQL, resulting in a 50% reduction in unauthorized access attempts
- Collaborated with a team of 11 developers following a Scrum-based Agile Software Development Life Cycle, conducting code reviews that identified and resolved a major bug, preventing updates to over 1 million database records and ensuring data integrity

PROJECTS

Discord Clone – Full Stack | Next.js, React-TypeScript, Tailwind CSS, Prisma, PostgreSQL and Socket.io

- Engineered a real-time communication platform similar to Discord, using React custom hooks, Prisma, and Socket.io, resulting in a seamless user experience with capabilities for message, voice and video calls
- Integrated Prisma with PostgreSQL, achieving easy-to-read schema and type-safe API for queries

Personal Tutor Web App – Full Stack | React.js, Node.js, Tailwind CSS, OpenAI API and Firebase

- Directed the development of an AI-driven web app using React.js and Node.js, which processes PDF documents to generate interactive, speech-enabled summaries, enhancing user engagement and learning outcomes
- Automated quiz generation using the GPT-4 API based on textual summaries, enhancing user retention by 30%

Distributed Algorithms | Java, Sockets, Threads and Locks

- Developed and managed a server-client architecture in Java to simulate the Bully's algorithm for leader election, effectively handling leader assignment based on client availability and network conditions
- Implemented robust multi-threading and synchronization mechanisms using Java's concurrent libraries, ensuring efficient handling and scalability of multiple client connections and leader election processes

Email Deletion Web App – Full Stack | HTML5, CSS, JavaScript, Flask (Python), AWS, Docker and Gmail API

- Led the development of Flask Web App to simplify the process of email deletion to minimize users' carbon footprint
- Utilized AWS DynamoDB with API Gateway and Lambda to store data and beta tested on 20 users with positive response
- Created a Chrome extension that pops up on Gmail, increasing user retention by 20%

EDUCATION

Rochester Institute of Technology, Rochester, New York

Aug 2020 – Aug 2023

Master of Science in Computer Science

GPA: 3.79/4.0

Relevant Coursework: Object-oriented Programming, Algorithms, Web Development, Distributed Systems, Cloud Computing

KJ Somaiya College of Engineering, University of Mumbai, Mumbai, India

Aug 2016 – Oct 2020

Bachelor of Technology in Computer Engineering

CERTIFICATIONS

AWS Certified Developer – Associate (April 2024), AWS Certified Solutions Architect – Associate (August 2022)

TECHNICAL SKILLS

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

Web Technologies: .NET Core, HTML5, CSS, React.js, Node.js, Flask, AWS, Spring Boot, Docker, Git, NUnit