

# Bhavika Sodagum

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## Education

### San Jose State University

Jan 2024 – Dec 2025

*Master of Science in Computer Software Engineering*

**Coursework:** Enterprise Software Platforms, Data Mining, Software Systems Engineering, Software Security Technologies

### CMR College of Engineering and Technology

Aug 2018 – Jun 2022

*Bachelor of Technology in Electronics and Communication Engineering*

**Coursework:** Data Structures and Algorithms, Relational Databases, Object-Oriented Programming, Operating Systems

## Experience

### Software Engineer | Capgemini

Jun 2022 – Jan 2024

- Spearheaded the creation of an e-commerce platform utilizing the MERN stack, achieving a **one-hour reduction in processing time** by optimizing verification and payment workflows for enhanced customer satisfaction.
- Developed REST APIs to support payment and order management features; conducted performance and load testing to handle up to **10,000 transactions per second, improving system scalability by 30%**.
- Implemented automated CI/CD pipelines using Jenkins, Git, and Docker to streamline testing, deployment, and version control, resulting in **10 hour weekly time savings**, fewer manual errors, and faster release cycles.
- Enforced unit and integration testing, attaining **95% code coverage** to guarantee software reliability and quality.

### Software Engineer Intern | Capgemini

Mar 2022 – Jun 2022

- Designed and enhanced user interface components for an e-commerce platform, **increasing user interaction and experience by 15%** using React, JavaScript, and CSS.
- Debugged and resolved issues in existing code, **reducing system errors by 10%** through Agile sprints and code reviews.

## Projects

### Stackoverflow Clone | MERN, Kafka, Redis, Redux, MySQL, MongoDB, AWS

Nov 2024 – Jan 2025

- Developed a scalable 3-tier distributed web application using the **MERN** stack, enabling 10,000+ concurrent users by integrating **Kafka** message queues, **Redis** caching, and **AWS** Load Balancers for enhanced scalability and performance.
- Implemented secure **REST APIs** with token-based authentication (Passport.js), optimizing data management by leveraging **MySQL** for relational data and **MongoDB** for unstructured data, ensuring high availability and efficiency.
- Built an interactive UI with **React** and **Redux**, enhancing engagement with responsive design and Chart.js for visualizations.

### Restaurant Finder | Java, Spring Boot, React, MySQL, AWS

Aug 2024 – Nov 2024

- Engineered a full stack RestaurantFinder application featuring advanced search and filtering capabilities, providing secure role-based access control (**RBAC**) for users, owners, and administrators, improving overall platform security.
- Integrated OpenStreetMap API and Overpass service for real-time geospatial data in location-based restaurant searches.
- Deployed on **AWS**, leveraging **EC2** with auto-scaling for traffic management, **RDS** for efficient database hosting, **S3** for storing static assets, and a load balancer to ensure fault tolerance, scalability, and high availability.

### FinanceGen | NLP, RAG, LLM

Jun 2024 – Aug 2024

- Built an AI virtual assistant using **Python**, Pinecone, and yFinance API to provide users with real-time stock insights, leveraging **NLP** for processing complex user queries and facilitate data-driven financial decisions.
- Integrated advanced **RAG** techniques with Google Flan-T5 and all-MiniLM-L6-v2, utilizing **LLM** capabilities to deliver fast and accurate responses via a Gradio-powered interface.

## Skills

**Languages:** Python, Java, C, C++, HTML, CSS, JavaScript, TypeScript

**Frameworks:** Express.js, React.js, Node.js, Spring Boot

**Cloud and Database:** AWS Lambda, API Gateway, EC2, S3, RDS, MongoDB, DynamoDB, MySQL, SQL

**Tools and Technologies:** Docker, Kubernetes, Apache Kafka, Git, GitHub, Postman, Jira, Visual Studio Code

**Others:** Agile, Front-end, Back-end, Full-stack, Verbal and Written communication skills, Microsoft Office, problem-solving

## Patents

### Portable Roti maker, MHRD, India, Patent No. 202141020647 A

May 2021

- Designed and developed a cost-effective portable roti maker using Arduino as part of Team JKLMN for the Smart India Hackathon (PR407), leading the team to victory. Youtube link

## Achievements and Activities

- Achieved Top 20 leaderboard finish at NVIDIA AI Hackathon-2024 using NVIDIA RAPIDS and deep learning techniques.
- Organized 30 cultural events and anchored 7 events as Vice President of the Event Management Club at CMRCET.