

# Venkata Reddy Bhimireddy

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## EDUCATION

**Purdue University , Indianapolis**

Computer and Information Science - Master of Science

**May 2025**

GPA: 3.63/4.0

## SKILL & OTHER

**Programming:** Java, Python, C++, C, C#(.NET), Relational Database(SQL, MYSQL, Oracle, Postgres), NOSQL,T-Sql

**Web Technologies:** HTML, CSS, Angular Js, React Js, Rest API, JavaScript, Typescript, PHP

**Tools:** Eclipse, Spring Tool Suite, Git, GitHub, Visual Studio Code, Cloud - AWS, Postman, MS Word

**Others:** Data Structures & Algorithms, Spring Boot, Backend, OOPS, Design Patterns, MVC, SDLC, Agile

## WORK EXPERIENCE

**Mathematics Assistance Center**

**February 2024 – Present**

*Math Tutor*

- Delivered personalized and group tutoring sessions in Calculus, Trigonometry, Algebra, and Geometry, enabling students to tackle complex mathematical problems with confidence.
- Partnered with fellow tutors to design and refine effective teaching methodologies and resources, enhancing the overall support system for STEM students.

**Cognizant , Hyderabad | Java, SpringBoot , Angular, React**

**August 2022 - July 2023**

*Software Engineer*

- Crafted and deployed robust Java applications with over 1.5 years of hands-on development using the Spring framework (Spring Boot, Spring Security, Spring Data JPA), delivering scalable enterprise solutions aligned with business needs and industry-leading standards.
- Developed and deployed scalable applications using Java, Ruby on Rails, and integrating Spring Boot web services to deliver high-performance enterprise solutions meeting industry standards.
- Designed and optimized RESTful APIs and microservices with JSON, SOAP, and Apache Kafka, validated via Postman, enabling real-time data exchange and interoperability across distributed systems.
- Containerized web and algorithmic solutions with Docker, deploying via Nginx, and automated CI/CD pipelines with Git, reducing deployment cycles by 20% and ensuring consistent code quality in Agile sprints.
- Implemented and maintained Spring Boot and Hibernate in projects like the Toll Bill Generator, leveraging microservices architecture with Apache Kafka for real-time data sharing and efficient database interactions with MySQL and Oracle.
- Enhanced application performance by refining SQL queries with indexing, improving data retrieval times by 12.5%, and implementing caching mechanisms in Spring Boot to reduce latency during high-traffic operations.
- Collaborated with cross-functional teams in an Agile environment, participating in sprint planning, code reviews, and architectural design reviews to deliver high-quality software solutions on time.
- Worked with relational databases (MySQL, Oracle) and applied JPA (Hibernate) for efficient object-relational mapping, ensuring robust data handling and readiness to adapt to PostgreSQL or MongoDB.
- Integrated user-facing elements with frontend developers using Angular, React, HTML, CSS, and JavaScript, ensuring seamless functionality and a cohesive user experience.
- Ensured security and scalability by implementing Spring Security and role-based access control in applications, aligning with best practices for maintainable and resilient systems.
- Conducted unit testing with JUnit, minimizing critical bugs and enhancing system reliability, while mentoring team members on technical designs to improve onboarding efficiency.

**Cognizant , Hyderabad | Java, SpringBoot , Angular, React**

**January 2022 – August**

**2022**

*Software Engineer Intern*

- Participated in a Cognizant internship program, gaining hands-on experience with Java Spring Boot and Angular frameworks.

- Learned to integrate back-end and front-end components by working on applications demonstrated by the company.
- Collaborated with senior developers to implement best practices for scalable, secure application development using Spring Boot.
- Applied Angular to build dynamic, responsive user interfaces, ensuring cross-browser compatibility and mobile responsiveness.

**Technovert | C# , ASP.NET, ADO.NET  
2022**

**September 2021 - January**

*Software Engineer Intern*

- Developed a **leave and attendance management system** for **Keka Software**, leveraging **ASP.NET MVC** for a structured and maintainable architecture.
- Integrated **ADO.NET** for efficient database interactions, optimizing SQL queries to enhance data retrieval performance.
- Designed and implemented **role-based authentication and authorization** using **ASP.NET Identity**, ensuring secure access to system functionalities.

## **PROJECTS**

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### **Cab Booking Application | Java, Distributed Systems, Kafka, Spring Security, Spring Data JPA**

- Developed a full-stack **Cab Booking application** using **Spring Boot**, **Kafka**, and **React**, enabling real-time location sharing and automated cab assignment.
- Implemented **Kafka producers and consumers** to transmit user and cab driver GPS coordinates and matched the nearest driver based on geospatial proximity.
- Built responsive **React frontend** components for both cab drivers and users, allowing real-time location input and dynamic cab assignment feedback.
- Designed and consumed **RESTful APIs** for sending and retrieving location data, enabling seamless interaction between frontend and backend services.
- Configured **Kafka locally using Docker** with Zookeeper, and integrated the messaging system into the Spring Boot application for asynchronous event handling.
- Utilized **H2 Database** for development and schema management, with Spring Data JPA repositories managing persistence logic.
- Followed MVC architecture and ensured **modular code structure** for scalability and maintainability of both backend and frontend.
- Integrated **JWT-based authentication** for secure access (optional if you added security features).

### **Heart Matching – AI Powered Developing Platform | Java, Hibernate , Spring Boot**

- Designed and implemented a full-stack matchmaking backend using Spring Boot, Spring Security, JWT, and WebSockets to support real-time communication.
- Integrated Spring AI with Hugging Face's MiniLM-L6-v2 model to compute user compatibility using semantic embeddings and cosine similarity, improving match relevance.
- Built secure authentication and authorization using JWT-based login, custom JwtFilter, and user roles.
- Implemented private chat functionality with WebSocket endpoints, enabling real-time messaging with support for read receipts, message status, and user blocking.
- Developed modular REST APIs (/api/auth, /api/match, /api/chat) with full Swagger/OpenAPI documentation for developer collaboration.
- Configured H2 and MySQL databases, along with Spring Data JPA, to manage user profiles, chat logs, and AI-processed embeddings.
- Enabled AI fallback mechanisms and exception handling to ensure availability and robustness even during Hugging Face API downtimes.