# Karthik Reddy Marla

(302) 618-8492, karthikreddy.marla@gmail.com, linkedin.com/in/karthikreddy-marla Visit my Portfolio

# **Summary**

Software Engineer with 3 years of Full-time experience, including a recent internship at Capital One, developing scalable web applications using React.js, Spring Boot, and MySQL. Skilled in RESTful APIs, GraphQL, JWT authentication, and cloud platforms such as AWS, Azure, and Google Cloud (GCP). Proficient in CI/CD pipelines (GitHub Actions, Jenkins), containerization technologies (Docker, Kubernetes), and object-oriented programming concepts and design patterns. Experienced in software engineering concepts including system design, application development, testing, and operational stability. Strong in debugging, performance optimization, system architecture, and Agile Scrum methodology, with additional experience mentoring students as a Graduate Teaching Assistant.

#### WORK EXPERIENCE

# Capital One Software Engineer Intern, Internship

Wilmington, DE May 2024 - Nov 2024

Worked on the development of internal banking applications, contributing to both frontend and backend components using React.js, Spring Boot, and MySQL. Participated in designing RESTful APIs and GraphQL integrations, implementing JWT-based authentication, and optimizing database performance. Supported cloud infrastructure and solutions on AWS (EC2, S3, Lambda, RDS, API Gateway) and automated CI/CD pipelines with GitHub Actions and Jenkins, ensuring secure, scalable, and reliable releases.

- Collaborated with senior developers and cross-functional teams to enhance enterprise banking applications, ensuring adherence to financial industry standards.
- Participated in code reviews and Agile Scrum sprints, contributing to high-quality, maintainable code and continuous delivery cycles.
- Gained experience in distributed systems, large-scale web application architecture, and performance tuning supporting real-time data processing and high traffic workloads.
- Developed solutions following software design patterns such as MVC and Singleton.
- Involved in software solution's development and maintenance including design, development, documentation, deployment, and testing.

# MOVATE Software Engineer, Full-time

Hyderabad, India Feb 2021 - Aug 2022

Joined MOVATE Technologies as a graduate trainee and focused on developing responsive, user-centric web applications using React.js, Tailwind CSS, and Redux Toolkit. Collaborated with backend teams to integrate RESTful APIs and GraphQL, worked in Agile sprint cycles, and contributed to delivering high-quality UI components that enhanced user experience and engagement. Gained experience in testing with Jest and React Testing Library, debugging production issues, and adhering to code review best practices.

- Collaborated in a cross-functional team of 6 developers and testers to deliver a scalable e-learning platform for an enterprise client, focusing on features like course enrolment, progress tracking, and content delivery.
- Developed responsive user interfaces using React.js, Tailwind CSS, Bootstrap, and Redux Toolkit, improving accessibility and reducing page load times by 30% across devices.
- Integrated frontend components with backend REST APIs and optimized MySQL queries, applying ORM patterns and database performance tuning techniques.
- Participated actively in Agile Scrum sprints, contributing to code reviews, sprint planning, and achieving 90%+ test coverage with Jest and React Testing Library, ensuring high-quality deliverables.

## Lead Software Engineer, Full-time

Sep 2022 - Jun 2023

Progressed into a Full Stack Developer role, taking ownership of both frontend and backend development for enterprise projects. Designed and implemented RESTful APIs and GraphQL endpoints with Spring Boot, developed secure authentication systems using JWT and Spring Security, and led cloud deployment using AWS (EC2, S3, RDS, Lambda, API Gateway). Played a key role in automating CI/CD pipelines with GitHub Actions, optimizing performance, and mentoring junior developers, ensuring high-quality, scalable solutions within Agile development cycles.

- Led the full-stack development of critical modules (product catalog, order processing, and authentication) in a team of 5 engineers, delivering a high-performance e-commerce platform for a retail client.
- Designed and deployed secure RESTful APIs with Spring Boot and Spring Security, implemented role-based access control and applied software engineering concepts for system design and operational stability.
- Spearheaded cloud deployment on AWS and contributed to DevOps practices, integrating Docker and Kubernetes for containerization and scaling.
- Mentored 2 junior developers on best practices in React.js and Spring Boot, and optimized performance through lazy loading, code splitting, and database indexing, achieving a 25% improvement in system response time.
- Worked with scripting languages such as Python and Shell, and managed builds using tools like Maven and Gradle.

• Served as an Academic Assistant, supporting faculty in teaching web development and programming courses by assisting students with coding assignments, clarifying technical concepts (React.js, Java, SQL), grading projects, and facilitating lab sessions to enhance learning outcomes.

#### **PROJECTS**

# **SmartCommerce – Full Stack E-commerce Application**

Tech Stack: React.js, Redux Toolkit, Context API, Tailwind CSS, Bootstrap, Spring Boot, MySQL, AWS (EC2, RDS, S3, Lambda, API Gateway), Docker, Kubernetes, GIT, GraphQL

A full-stack e-commerce platform enabling product browsing, cart management, secure checkout, and order processing, built with scalability, security, and cloud deployment best practices.

- Developed responsive, modular UIs using React.js, Redux Toolkit, Context API, Tailwind CSS, and Bootstrap, ensuring cross-browser compatibility and reducing page load times by 30%.
- Designed and deployed secure RESTful APIs and GraphQL with Spring Boot, integrated JWT-based authentication and Spring Security, and optimized MySQL schemas for scalable backend performance.
- Deployed backend services to AWS using EC2, RDS, Lambda, and API Gateway, containerized the application using Docker and Kubernetes, and automated CI/CD pipelines with GitHub Actions, cutting deployment time by 40%.
- Implemented comprehensive unit and integration testing using Jest, React Testing Library, Mocha, Pytest, and validated APIs with Postman, achieving 90%+ test coverage.
- Enhanced performance through lazy loading, code splitting, and database indexing.
- Applied MVC software design pattern and ORM database design.

#### **SKILLS**

- Frontend Development: React.js, Redux Toolkit, Context API, Tailwind CSS, Bootstrap, Angular, Vue.js, JavaScript (ES6+), TypeScript, HTML5, CSS3, Responsive Design, API Integration, XML, XSL, UI frameworks
- Backend Development: Java, JAVA/J2EE, Spring Boot, Spring Security, Hibernate, Node.js, Express.js, RESTful APIs, GraphQL, JWT Authentication, MVC Architecture, SOA, Microservices, scripting languages (Python, Shell)
- Database Management: SQL, MySQL, PostgreSQL, MongoDB, NoSQL, RDBMS concepts, ORM, Schema Design, Query Optimization, Database Performance Tuning, Data Layers
- Cloud & DevOps: Cloud platforms (AWS, Azure, GCP), AWS services (EC2, S3, Lambda, RDS, API Gateway), Docker, Kubernetes, CI/CD Pipelines (GitHub Actions, Jenkins), Cloud Deployment, Cloud Infrastructure and Solutions
- Testing & Quality Assurance: Jest, React Testing Library, Mocha, Postman, Pytest, JUnit, NUnit, Unit Testing, Integration Testing, Automation Testing
- Version Control & Tools: Git, GitHub, Jira, VSCode, Agile Scrum, Agile Kanban, SDLC Best Practices, Code Reviews, Software Build Tools (Maven, Gradle)
- **Performance & Optimization:** Lazy Loading, Code Splitting, API Caching, Database Indexing, Debugging, Performance Optimization, System Architecture
- Software Engineering Concepts: Software Design Patterns (MVC, Singleton), System Design, Web Technologies, Application Development, Operational Stability, Design Principles and Troubleshooting

### **EDUCATION**

# Master's in Information Systems Technologies

Aug 2023 - May 2025 New Castle, DE

Wilmington University, GPA: 3.6

Relevant Coursework: Data Structures & Algorithms, Software Development, API Development, Databases (SQL & NoSQL), System Design, Distributed Systems, Cloud Computing, Java (Spring Framework), Front-End Development (React.js, HTML, CSS), MySQL, PostgreSQL

# **Bachelor of Science in Electronics and Communications Engineering**

Jawaharlal Nehru Technological University

Jun 2019

#### **CERTIFICATIONS**

# **AWS Certified Developer – Associate**

Jan 2025

Amazon

# **Meta Front-End Developer Professional Certificate**

Aug 2024

Coursera