Jay Madupalli

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Education

Master of Science in Computer Science – Missouri State University	**Dec 2023**
Graduate Certificate in Data Science – Missouri State University	**Dec 2023**
Bachelor of Technology in Computer Science – Jawaharlal Nehru Technological University, Kakinada	**May 2019**

Skills

Languages: TypeScript, JavaScript, Java, Python, PHP
Frontend: React, Next.js, Redux, React Query, Angular, RxJS, Ngx Datatable, Tailwind, Bootstrap, SCSS, CSS
Backend: Spring Boot, Spring JPA, Spring Security, JUnit, Node.js, NestJS, WebSockets, WebRTC, TypeORM, Flask
Other: AWS, NPM, Vite, Maven, SQL, NoSQL, Git, Docker, CI/CD, Apache Spark, Kafka, Bash, Nginx, Tomcat

Experience

Graduate Research and Teaching Assistant, Missouri State University – Springfield, MO   **Aug 2022 – Dec 2023**
- Devised decentralized crowdsensing framework for user privacy, integrated behavioral economics for retention
- Developed Solidity smart contracts and conducted simulations using TypeScript for performance refinement
- Published conference research paper and taught, graded, and provided feedback to 150+ students over 1.5 years

Full Stack Developer, Myron Royce Gardens – Ozark, MO   **May 2023 – Aug 2023**
- Developed a customer management portal, replacing 40+ disparate Excel sheets, and centralizing customer data
- Built the portal using Node.js, React, and PostgreSQL, ensuring seamless deployment and user-friendly features
- Reduced customer support overhead by 30% through the transition, streamlining 25+ services for 800+ clients

Software Developer, ResNet, Missouri State University – Springfield, MO   **May 2022 – Aug 2022**
- Automated device registration for 400+ machines across 9 residence halls using Python for inventory efficiency
- Developed REST APIs (Flask), refactored DB schema for dynamic device data improving equipment tracking
- Improved application UX through equipment page redesign and DOM manipulations, boosting productivity

Software Engineer, Axiom IO – Hyderabad, India   **Feb 2020 – Oct 2021**
- Led a team in developing a telemedicine app with Node.js and Angular to facilitate remote healthcare access
- Integrated video conferencing and chat features using WebRTC and WebSockets for real-time communication
- Architected HIPAA-compliant, scalable multi-tenant system on AWS using EC2, RDS, S3, Route53, and SES
- Established error-handling mechanisms in AWS Lambdas (Flask) for data reliability in a data warehousing app
- Created UI components for streamlined error resolution, improving data preprocessing efficiency and UX

Founder, Skillerz – Remote | [Archive Links]   **Dec 2015 – Sept 2021**
- Developed ad network accumulating $100k+ revenue and 42,000+ users over 5 years with PHP, MySQL, Nginx
- Refactored features and implemented load balancing strategies for scalability, handling millions of impressions
- Automated payments and site management by integrating external APIs, scheduled cron jobs, and shell scripts
- Initiated comprehensive web ecosystem including traffic exchange app, internet forum, and web hosting service

Projects

redy-blog | Next.js, React, Spring Boot, Tailwind, Docker   github.com/jmadupalli/redy-blog
- Developed dynamic blog CMS with Next.js, React, and Spring Boot, featuring rich text and markdown support
- Implemented JWT authentication, authorization, user management, admin dashboard, and server-side rendering

shortly | Spring Boot, React, Tailwind, Docker   github.com/jmadupalli/shortly
- Created URL shortener with JWT authentication and REST APIs for managing URLs and retrieving tracking data
- Implemented URL statistics for country, device, browser, and OS using IP address and user agent parsing