Harshitha Karnati

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Education

North Carolina A&T State University **01/2023 - 05/2024**
Master of Science in Information Technology - 3.85/4.0 *Greensboro, NC*

VNR Vignana Jyothi Institute of Engineering and Technology **08/2017 - 07/2021**
Bachelor of Technology in ECE - 9.25/10.0 *Hyderabad, India*

Technical Skills

Programming & Web Development: Python, Java, HTML, CSS, Bootstrap, Tailwind CSS, JavaScript, TypeScript, React.js, Next.js, Node.js, Express.js
Databases & Data Science: MySQL, MongoDB, PostgreSQL, Machine Learning, Deep Learning, Neural Networks
Cloud & DevOps: AWS (EC2, S3, Lambda, DynamoDB, SQS, API Gateway), Docker, Kubernetes, Jenkins, Terraform, CI/CD Pipelines, AWS CloudFormation, Helm.
Tools & Version Control: Git, GitHub, JIRA, RESTful APIs, Microservice Architecture, Apache Kafka.

Experience

Hoosier Community Network **06/2024 – Present**
Senior Software Engineer *Bloomington, Indiana*

- Led the development of the DWIG Talent Matcher using React, Node.js, Express.js, and MongoDB. Designed RESTful APIs, optimizing system efficiency by 15% and integrating Redux for state management.
- Deployed CI/CD pipelines using Jenkins and GitLab CI, automating builds, tests, and deployments, which reduced release cycles by 50% and improved deployment accuracy.
- Collaborated with cross-functional teams, including designers, project managers, and data analysts, to align project objectives and streamline agile feature rollouts, while implementing event-driven architecture for asynchronous service communication, enhancing scalability and responsiveness in high-throughput scenarios.
- Contributed to sprint planning, user story refinement, and technical debt management, helping the team adhere to agile practices and ensuring timely delivery of project milestones.

North Carolina A&T State University **05/2023 – 05/2024**
Graduate Research Assistant *Greensboro, NC*

- Analyzed large-scale medical datasets using neural networks, focusing on privacy-preserving techniques like R-DP, and provided insights on privacy-accuracy trade-offs to develop secure, compliant solutions for medical data sharing in collaboration with faculty and peers.

Intense Technologies **01/2021 – 01/2023**
Junior Web Developer *Hyderabad, India*

- Maintained a responsive website, enhancing functionality and user experience across devices, resulting in a 20% increase in user retention. SEO strategies like meta-tag optimization and backlink generation, driving 35% boost in traffic.
- Managed SEM campaigns, optimized lead capture forms, and executed SMM strategies, increasing website visibility by 25% and inbound leads by 20%. Collaborated with marketing and design teams to align updates with business goals, showcasing teamwork and adaptability.
- Monitored site performance using Google Analytics and SEMrush, generating insights to improve campaign effectiveness. Ensured fast loading times, robust security, and responsive design, achieving a 40% improvement in site performance.

Academic Work

E-Commerce Platform | *React.js, Redux, Node.js, Express.js, MongoDB, Stripe, Socket.io, Tailwind CSS*

- Built a scalable multi-vendor e-commerce platform using the MERN stack and Tailwind CSS, featuring JWT-based authentication, real-time chat with Socket.io, Stripe payment integration, and role-specific dashboards.
- Setup RESTful APIs, middleware for protected routes, stock management, Cloudinary-based image uploads, and admin-to-vendor payment transfers while ensuring responsive design and optimal performance.

Responsive Portfolio | *React, Framer Motion*

- Created a responsive portfolio website, incorporating Framer Motion animations to elevate visual aesthetics and provide an interactive, dynamic user experience across various platforms. [Link]

Publication

Preserving Medical Data with Rényi Differential Privacy | *2024 IEEE World AI IoT Congress (AIIoT)*

- Conducted in-depth analysis of Rényi Differential Privacy to advance the privacy and security of medical data. The research demonstrated significant improvements in the privacy-accuracy trade-off, offering novel, practical solutions for secure medical data sharing and compliance with privacy regulations. [Link]