Vivek Gaddam

Albany, NY

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Summary

Software Developer with 2+ years of experience in full-stack development, specializing in designing, developing, and testing scalable applications. Skilled in React.js, Python, and JavaScript with a focus on code efficiency, debugging, and software architecture. Proven ability to collaborate with cross-functional teams to deliver impactful solutions.

Education

University At Albany, State University of New York August 2023 – May 2025
Master of Science in Computer Science (GPA: 3.5/4) *Albany, NY*

CVR College of Engineering, (JNTU) August 2019 – May 2023
Bachelor of Technology in Electronics and Communication Engineering (GPA: 3.5/4) *Hyderabad, India*

Experience

Software Developer for WebNY May 2024 – Present
New York State Office of Information Technology Services *Albany, NY*
- Built and optimized websites for NYS agencies using Drupal CMS, PHP, JavaScript, and Bootstrap, ensuring responsive and visually polished designs across all devices. Delivered seamless user experiences in compliance with WCAG, NYS Information Security Policies, improving accessibility and security.
- Enhanced over 50 Drupal modules, implementing custom authentication, role-based access controls, and security patches to mitigate vulnerabilities such as SQL injection, while boosting system performance by 40% through optimized queries, lazy loading, and caching strategies.
- Designed responsive, ADA-compliant interfaces using HTML, Twig, CSS, and SASS for all breakpoints. Increased page views by 30% and reduced load time by 50% by optimizing asset delivery, integrating CDNs, and improving navigation with mega menus and dynamic search filters.
- Applied UI/UX best practices through comprehensive visual reviews, prototyping, and usability testing to ensure intuitive layouts and seamless interactions.
- Conducted detailed code reviews to maintain efficient, and optimized code, aligning design and functionality with user needs and accessibility standards.
- Developed custom modules for content approval workflows and multi-agency permissions, integrating real-time API connections to support scalable and secure backend processes and improving editorial efficiency by 50%.
- Led Acquia Implemented automated CI/CD pipelines and led Acquia Cloud and Docker deployments using Jenkins and YAML configurations, reducing deployment errors by 60% and enhancing platform scalability and reliability.

Founder & CEO March 2022 – April 2023
EFORGE NexGen Innovations Pvt. Ltd. *Hyderabad, India*
- Led a student startup focused on prototype conversion and product delivery, emphasizing automation and secure solutions for smart cities and agriculture.
- Developed React.js-based dashboards and Android apps for real-time data analytics using Firebase and AWS, reducing backend latency by 40%.
- Implemented ML models using Python, Selenium automation for prediction and recommendation for agricultural productivity, cutting downtime by 35%.
- Converted 3 AI-powered prototypes into commercial systems, enhancing operational efficiency by 20% across industries.
- Leveraged OOP principles and optimized algorithms to create scalable, user-friendly applications with efficient RESTful API workflows, ensuring robust performance and secure data handling.
- Conducted data-driven investor pitches showcasing AI-powered automation, securing funding and achieving a 30% revenue increase.

Research Intern January 2021 – March 2022
NewGen Innovation Center, CVR College of Engineering *Hyderabad, India*
- Designed and implemented a machine learning-based optimization model to solve environmental resource allocation problems for smart farming systems.
- Developed a real-time reporting dashboard using JavaScript, HTML, and CSS to visualize IoT-based agricultural data.
- Built API integrations for IoT sensors, ensuring seamless data collection and processing with backend services using Python, and AWS.
- Created prototype for a predictive weather station powered by IoT and ML for real-time monitoring, achieving 70% accuracy in precipitation forecasting.
- Conducted extensive evaluations on system scalability and reliability, presenting findings in a research paper published in a Scopus-indexed journal.
- Optimized backend workflows by implementing scripts in Python to automate real-time data analysis tasks, improving overall system latency by 40%.

Projects

AI based Smart Interview Preparation App (PrepSmart) September 2024-December 2024
- Designed a scalable smart interview preparation platform using React.js with TypeScript for the frontend and Node.js for the backend.
- Developed AI-powered feedback systems with machine learning for code and oral interview analysis and speech-to-text for technical responses.
- Built real-time interview features using WebSocket for video recording, question narration, and performance tracking.
- Created RESTful APIs for seamless frontend-backend communication and a MongoDB schema to store user activity and feedback.
- Optimized application performance by following best practices for scalability and reliability.

E-Commerce Application September 2024-December 2024
- Developed a user-friendly e-commerce platform with seamless UI/UX, using MongoDB for storage and Docker for containerization.
- Deployed the application on AWS with Caddy as a reverse proxy for optimized hosting and performance.

Dual Communication System for Device Interaction October 2023-December 2023
- Developed a dual communication system using TCP/IP, pipes, and sockets for reliable device interaction and optimized data exchange.
- Implemented tag system for message transfer with low-latency message flow.

Smart Precision Farming Using IoT Data Analytics June 2021-August 2022
- Developed precision farming solution using machine learning (SVM) and IoT, achieving 90% accuracy in predicting optimal crop resource allocation.
- Conducted EDA to identify trends, improving decision-making and fostering sustainable farming practices via Android Studio and TTN.

Algorithm Visualizer November 2020
- Developed a website for sorting algorithms, providing visualization and customizations on a website. https://Visualiser.io/

Skills

Programming Languages & Databases: Java, C, C++, Python, JavaScript, Ruby, SQL, PostgreSQL, MongoDB, MySQL, Oracle Database
Frontend Development: HTML, Twig, Tailwind,CSS/SASS, Drupal, AJAX, DOM, Software Design, Software Development
Developer Tools & Platforms: VS Code, IntelliJ IDEA, Eclipse, Docker, pgAdmin, GCP, Webpack, Vite, Linux, Microsoft Office, LaTeX, Jenkins, NPM, Power Shell, Bootstrap
Technologies/Frameworks & Cloud: WordPress, .NET, React.js, Express.js, Node.js, GitHub, AWS, RestfulAPI, Vue.js, Angular.js, Ruby on Rails
Frameworks/Tools: React.js, Apache Kafka, Jenkins, Docker
Project Management & Testing: JIRA, Agile Methodologies, Scrum, Selenium, Kernel

Publications & Patents

Under Mathematical Statistician and Engineering Applications - Scopus Indexed on 12/21/2022
- "Smart Precision Agriculture using IoT Data Analytics" - philstat.org.ph/1450
- "A Machine Learning Perspective to Foster Accuracy and Prediction of Urbanization using Automatic Weather Station" - philstat.org.ph/1451

Patent published under Intellectual Property India (Government of India) in 2023
- "Data Analytics Powered Smart Precision Farming to Increase Crop Yield" - 202341008759
- "Machine Learning Powered IoT Weather Station to Predict the Rate of Urbanization" - 202341008760
- "Data Analytics Powered IoT Weather Station to Determine the AQI Index in a Micro Climatic Zone" - 202341027954

Certifications

Web Developer Certificate – UDEMY

Java, Python, JavaScript Programming - Hacker Rank

Database Programing with SQL – ORACLE