Harsha Masandrapalya Vanarajaiah

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Education

George Mason University **August 2022 - May 2024**
Master of Science, Computer Science | GPA: 3.92 / 4.0 Fairfax, VA
Coursework: Analysis of Algorithms, Application Data Mining, Component-based Software Development, Advanced NLP

Visveswaraya Technological University **August 2016 - July 2020**
Bachelor of Engineering, Computer Science | GPA: 3.52 / 4.0 Bengaluru, India

Technical Skills

Programming Languages: Python, C, JavaScript, Java, Typescript
Web Technologies: HTML, CSS, React, Redux, Sass, Angular, NodeJS, Spring Boot, Express.js, Flask, REST
Databases: MySQL, PostgreSQL, MongoDB
Software Tools: Jenkins, Maven, VS Code, Git, Kubernetes, Ansible, AWS, EC2, S3, POSTMAN, Figma, Jira, React DevTools, Apache Tomcat

Experience

Graduate Assistant **July 2023 – Present**
George Mason University | System Programming, Systems Architecture, C Fairfax, VA
- Instructed 80 students in Systems Programming and Systems Architecture, covering data representation, assembly language, single and multiple-cycle, pipeline architectures, Memory hierarchy, and tools, mentoring projects on CPU scheduling and a UNIX-like shell task monitor (VIMU), enhancing understanding of CPU, and process management.

Software Engineer **February 2021 – July 2022**
Accenture | Node.js, Express.js, Jenkins, Kubernetes, Ansible Bengaluru, India
- Built modules to store and modify data while building Web APIs with Node.js and Express.js.
- Implemented cutting-edge analytical engines that pull data from API data sources and then deliver it back as either an API or persist it back into a NoSQL platform, reducing the time to obtain crucial information by 30%.
- Used Jenkins CI for continuous integration using the Apache Maven build tool to automate the build process, eliminating 80% of human labour and increasing productivity.
- Built servers using AWS, including adding the required volumes, starting the EC2 instance, building security groups, auto-scaling, load balancers, Route 53, and SNS in accordance with the architecture.
- Established multiple Kubernetes Clusters in AWS and deployed a Docker Image on top of Kubernetes Cluster.
- Generated more than 50 unique Ansible roles and playbooks for the deployment of software and Ansible roles were given a new standard, and 80% of the current roles were refactored to assure compliance.

Software Engineer Intern **June 2019 – October 2019**
Celestial V Solutions | React, JavaScript, Git Bengaluru, India
- Developed front-end UI components for a course material application using React.js, HTML5, and CSS3, and enhanced project scalability by creating and deploying over 10 REST microservices using the Serverless framework.
- Created tailored React components that efficiently incorporated Axios for asynchronous HTTP requests.

Projects

Cloud2Cloud | React, Python, Ansible, AWS EC2, Flask **November 2023**
- Developed an advanced Cloud-to-Cloud automation platform, utilizing Python, Flask, and Ansible to automate the deployment of ReactJS, Node.js, and Python applications on AWS, significantly reducing manual deployment effort by 70%, accelerating deployment cycles by 50% and streamlining the deployment process for small scale industries.
- Engineered a CI/CD pipeline with GitHub Webhooks for automatic detection and deployment of code updates across deployed applications, ensuring 99.9% uptime and real-time scalability and performance improvements.
- Implemented Ansible for Infrastructure as Code (IaC) to automate AWS provisioning and configuration, cutting server setup times by 60% and operational costs by 40% through resource optimization.
- Developed a user-friendly interface for clients to easily access deployed application URLs, AWS server credentials, and usage metrics, enhancing client control and transparency over their hosted applications.

Social Media Application - Twitter Clone | React, Node.js, MongoDB **July 2023**
- Designed a full-stack web application similar to Twitter, which facilitates user authentication, following/unfollowing of other users, tweeting, and browsing tweets from up to 100 concurrent users.
- Devised and optimized an algorithm that utilizes user interactions with tweets to curate a personalized tweet feed, prioritizing tweets with a poll rating of over 80%.
- Enhanced data retrieval performance by 30% through optimized MongoDB integration for JSON storage.

University Department website | Angular, Spring Boot, Kubernetes, Amazon EC2 **December 2022**
- Created a dynamic web application with Angular2, RESTful Web Services, Tomcat, Spring Boot, and Amazon RDS that allows students to participate in surveys, extract class data from PDFs, and access user-friendly data analysis.
- Choosed Rancher with Kubernetes for its user-friendly interface, simplifying app deployment, scaling, and monitoring within the cluster.
- Hosted dockerized components on different AWS EC2 instances so that each are independent and easily scalable.