

SURYA PRADEEPTHI CHAKKA

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EDUCATION

Auburn University

Master of Science in Computer Science and Software Engineering

Auburn, AL

Sathyabama Institute Of Science and Technology

Bachelor of Engineering in Computer Science and Engineering

Chennai, India

SKILLS SUMMARY

Programming Languages: Python, JavaScript, Java, C, Shell Scripting.

Frameworks: FastAPI, ReactJS.

Web Technologies: HTML, CSS3, JSON, Bootstrap, Tailwind CSS.

Databases: MySQL, NoSQL (MongoDB) .

Version Control & Collaboration: GitHub, Git Bash, JIRA.

DevOps & Tools: Docker, Jenkins, Kubernetes, Helm Charts, ArgoCD, Terraform, Ansible, Maven, AWS (CloudFormation, CodeBuild, CodePipeline, EC2, ECR, ECS, EKS, Lambda Functions, S3, VPC, CloudWatch, DynamoDB, AWS Glue, Amazon Athena.), Azure

Operating Systems: Linux, Windows, MacOS.

Other Skills: Yaml, XML, Algorithms Design and Analysis, Data Structures, Object-Oriented Programming (OOP), Agile Methodology .

PROFESSIONAL EXPERIENCE

Auburn University

Graduate Research Assistant

Auburn, AL

Jun 2023 - Dec 2024

- **Advanced Technology with Augmented Reality:** Collected and organized a comprehensive dataset of over 1,000 records, categorizing hand gestures into left hand, right hand, and pigmented hands.
- Assisted in data cleaning and pre-processing, ensuring accuracy and consistency for further analysis and model development.
- Contributed to the development of a hand gesture recognition system for integration into augmented reality (AR) applications, improving recognition accuracy.
- Supported the development and testing of advanced learning technologies such as AR/VR and mobile/web applications.
- Collaborated with academic and research teams on data analysis, model development, and documentation to ensure project success.

Kyndryl

Junior Devops Engineer

Bangalore, India

Jun 2020 - Dec 2022

- **Configuration Management & Automation with Ansible:** Utilized Ansible for efficient Configuration Management and automation of infrastructure and application environments.
- Developed and maintained Ansible playbooks written in YAML to automate tasks, declare configurations, and provision infrastructure.
- Orchestrated and automated application and infrastructure management, ensuring system integrity and consistency across deployments.
- Ensured system updates and configurations were up-to-date, reducing manual intervention and error-prone configurations.
- **MERN Stack CI/CD on AWS EKS:** Designed and managed AWS infrastructure using Terraform, including EKS clusters, EC2 instances, and private VPCs.
- Integrated OWASP and SonarQube into Jenkins for automated code quality assessments, reducing post-deployment bugs by 30%.
- Used Splunk for centralized logging and Trivy for container security scanning.
- Implemented ArgoCD for streamlined Kubernetes deployments and updates, improving release management.
- **3-Tier E-Commerce Application on AWS EKS:** Established a highly available AWS EKS cluster, reducing configuration errors by 25% through IAM OIDC for optimized service account management.
- Orchestrated the deployment of a 3-tier e-commerce application with Helm charts and managed traffic routing through Ingress controllers.
- Provisioned AWS EBS for persistent storage and utilized auto-scaling policies to handle fluctuating traffic loads.

Third Binary IT Solutions

Software Engineer Intern

Hyderabad, India

Mar 2019 - May 2020

- **Automated CI/CD Pipeline on AWS:** Engineered a robust CI/CD pipeline with AWS CodeBuild, CodePipeline, and CodeDeploy, linking GitHub repositories for secure software delivery.
- Administered IAM roles and deployed an AWS EKS cluster using Fargate for serverless infrastructure.
- **Kubernetes Cluster Monitoring with Prometheus and Grafana:** Developed a monitoring solution for a Kubernetes cluster using Minikube, Prometheus, and Grafana to track and visualize performance metrics.
- Created custom Grafana dashboards to monitor resource usage and cluster health in real-time.
- **Secrets Management Optimization with HashiCorp Vault:** Designed and implemented secure infrastructure using HashiCorp Vault for managing secrets in AWS.
- Integrated Vault with Terraform to streamline provisioning and ensure secure management of sensitive data.
- **Weather Dashboard with AWS and OpenWeather API:** Built a weather dashboard to fetch real-time data from the OpenWeather API and store it securely in an AWS S3 bucket.
- Automated the process of fetching and structuring weather data using environment variables and IAM security.
- **NBA Game Notification System Using AWS and API Integration:** Developed an automated notification system for NBA game updates using AWS Lambda, SNS, and EventBridge.
- Integrated the NBA API for real-time game data and used AWS SNS to send notifications via email, SMS, and phone.

ACADEMIC PROJECTS

- **Internet-Based Sale and Purchase for Mobiles:** Developed an online platform for mobile sales and purchases using CSS, Java, and SQL, implementing user-friendly interfaces and secure transactions.
- **Crime Record Management System:** Built a system using Python and MySQL for police stations to manage and track crime cases, improving case management efficiency.
- **Traffic Accident Severity Prediction:** Developed a machine learning model using KNN, Logistic Regression, and Decision Trees to predict traffic accident severity and identify hazardous road conditions, with an integrated alert system for user safety.
- **Secure Cloud Computing with OpenStack:** Set up and managed OpenStack environments, deploying virtual machines, configuring NAT, DNS, and firewall rules, and implementing Ceph for storage. Managed multi-node setups and ensured resource accessibility for tenants.
- **Login System with Python (Flask) and MySQL:** Developed a Flask-based login system with MySQL for data storage, featuring dynamic form creation, user credential validation, and secure error handling.

CERTIFICATIONS

- AWS Certified Cloud Practitioner
- Microsoft Certified: Azure Fundamentals (AZ-900)
- HackerRank SQL Certification
- Codecademy SQL Certification