JITHENDRA KANTHARAJU

+1 (971)-491-7975 | jithendrak@usf.edu | [LinkedIn](#) | [Portfolio](#) |

Education

University of South Florida, Tampa — **January 2025 − Present**

Master of Science in Computer Engineering

Relevant Coursework: *Fair ML, IOT Security, Agile Project Management, Computer Architecture.*

Technical Skills

Programming Languages: C, OOPS C++, Python, Embedded c, MYSql basics, Bash.
Infrastructure & Configuration Languages: YAML, HCL.
Developer Tools & Platforms : Linux & CLI, Vagrant, Git & GitHub, GitHub Actions, Maven, Jenkins, Nexus, SonarQube, Ansible, Docker & Docker Compose, Kubernetes, Terraform.
Libraries & Framework Integrations: Ansible modules, Jenkins Pipeline DSL, Python stdlib.

Work Experience

Trainee Software Engineer — **August 2023 − December 2024**

Corezeal Technologies — *Bangaluru, India*

- Managed Linux-based server environments using tools like Vagrant and bash scripting, automating daily administrative tasks and ensuring optimal system performance.
- Built and deployed highly available cloud infrastructure on AWS(EC2, S3, RDS, ELB, IAM, CloudWatch, Auto Scaling) to ensure scalability and reliability.
- Implemented CI/CD pipelines with Jenkins, Maven, Nexus, and SonarQube for automated testing, building, deployment, and Slack-based notifications.
- Automated cloud resource provisioning and configuration by developing infrastructure as code solutions using Ansible and Terraform.
- Containerized and orchestrated applications with Docker and Kubernetes, and leveraged GitOps practices using AWS CodePipeline, GitHub Actions, and Terraform for seamless, version-controlled deployments.

Intern — **September 2021 − October 2021**

Agimus Technologies Pvt Ltd. — *Bangaluru, India*

- Developed an ESP32-based IoT device to remotely monitor COVID-19 patients' vital signs (non-contact temperature via MLX90614, pulse/O2 via MAX30102), enabling real-time, contactless health tracking.
- Programmed device firmware for Wi-Fi connectivity and automated logging of timestamped data to Google Sheets, supporting secure, cloud-based remote access and monitoring.
- Integrated cloud-based alerts using Google Apps Script and Twilio SMS to notify doctors of abnormal readings, and contributed to user-friendly hardware design for rapid deployment in isolation settings.

Projects

Movie Streaming Application

- Designed and deployed a scalable full-stack movie streaming platform using a containerized microservices architecture.
- Automated testing, **Docker** builds, and Kubernetes deployments on **AWS EKS** using **Jenkins** CI/CD.
- Configured **AWS S3** for secure media storage with public access policies and dynamic bucket management.
- Utilized Nginx to serve static frontend content and **Node.js** for backend API services.
- Managed infrastructure using **AWS EC2** for Jenkins agents and **RDS** for persistent **MySQL** storage.

Detecting Voice Clones in Voice Assistants

- Engineered a machine learning pipeline using **Python**, **Scikit-learn**, and **Librosa** to analyze audio datasets and extract **MFCC features** for distinguishing between authentic and AI-cloned (**ElevenLabs**, **Tacotron2**, **VITS**, **OpenVoice**) voices, strengthening voice assistant security.
- Developed and trained a Support Vector Machine (**SVM**) classifier, achieving 96% accuracy in detecting synthetic audio samples, thereby demonstrating effective acoustic spoofing detection capabilities.
- Conducted real-world vulnerability assessments on **Apple Siri** using advanced cloned voice samples, uncovering security risks and proposing robust enhancements for biometric voice authentication systems.

CI/CD Pipeline for React App on AWS

- Architected and implemented a complete CI/CD pipeline on **AWS** to automate the build, and deployment of a **React.js** application.
- Utilized AWS CodePipeline to automatically trigger the pipeline upon code commits to a GitHub repository.
- Automated dependency installation and builds in AWS CodeBuild using buildspec.yml.
- Deployed the built application to an **AWS S3** bucket, configuring it for static website hosting with public access.