Vusala Shiva Kumar

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CAREER OBJECTIVE

EEnthusiastic and results-driven B.Tech graduate in Electronics and Communication Engineering with a solid foundation in **software development**, **application architecture**, and **cloud computing**. Proficient in **.NET**, **.NET Core**, **Node.js**, **Java**, and **Python**, with hands-on experience in both **backend development** and **REST API integration**. Skilled in building **responsive**, **accessible** (**WCAG-compliant**) user interfaces using **HTML**, **JavaScript**, and **state management** techniques. Familiar with **CI/CD pipelines**, **DevOps**, and **cloud infrastructure**, with a keen understanding of **scalability**, **security best practices**, and **workflow automation**. Experienced in **component-based development**, **data modeling**, and **low-code/no-code platforms**, and proficient in design tools like **Figma** and **Adobe XD** for **UI/UX prototyping**. Eager to **collaborate** within an **Agile/Scrum** environment, contributing to **iterative development** and **continuous improvement** while delivering scalable, compliant, and impactful solutions.

EDUCATION

Bachelor of Technology in Electronics and Communication Engineering — CGPA : 7.46/10
Vidya Jyothi Institute of Technology , Hyderabad — 2022 – 2025

INTERNSHIP

SPR Human Capital Solutions (24/01/2022 - 23/07/2022)
Role : Trainee

- Gained practical knowledge of optical fiber communication and transmission principles.
- Observed fiber types, splicing, and signal loss in real-time setups.

Hindustan Aeronautics Limited (16/08/2024 - 16/09/2024)
Role: Intern

- Learned high-power RF transmitter operation and signal modulation basics.
- Assisted in testing, maintenance, and performance monitoring tasks.

TECHNICAL SKILLS

- **Programming Languages :** Python, JavaScript, HTML5, CSS, C#.
- **Frameworks & Libraries :** Flask, Django, React.js, Bootstrap, OpenCV.
- **Databases :** MySQL, SQLite.
- **Tools & Platforms :** Git & GitHub, Postman, Springboot, VS Code, PyCharm, Docker, Heroku.
- **Machine Learning & Embedded :** Convolutional Neural Networks (CNN), OpenCV, MediaPipe, Arduino & Embedded C.

SOFT SKILLS

Analytical Thinking, Adaptability, Team Collaboration, Continuous Learning, Problem-Solving, Time Management, Communication Skills, Initiative, Critical Thinking, Creativity.

PROJECTS

Automated Leaf Disease Detection using Machine Learning and Deep Learning - 2025
Team Size: 4 | Role: Model Developer & Preprocessing Engineer
Tools: Python, TensorFlow, Keras, OpenCV, Scikit-learn

- Built a CNN-based system to classify plant leaf diseases with ~95% accuracy. Trained on 5,000+ images from the PlantVillage dataset using preprocessing techniques.
- Applied data augmentation methods like rotation and flipping to improve accuracy. Enhanced generalization and reduced overfitting for real-time performance.
- Suggested preventive measures based on disease type to guide pesticide usage. Aimed at reducing crop loss and pesticide overuse through early diagnosis.
- Created a simple, user-friendly interface for easy use by farmers and agri-workers. Allowed users to upload images and receive instant disease predictions.
- Explored deployment via TensorFlow Lite for mobile and IoT-based solutions. **Won 1st prize** at VJIT Contrive 2K25 Expo for innovation in agriculture.

Accident Detection and Alert System using Arduino - 2023
Team Size: 4 | Role: Embedded Developer
Tools: Arduino, C, GSM, GPS, Vibration Sensor

- Designed an embedded system to detect vehicle collisions using vibration sensors. Triggered SMS alerts with real-time GPS location upon accident detection.
- Programmed the system using C on Arduino for real-time event monitoring. Integrated GSM and GPS modules for communication and location tracking.
- Ensured accurate detection through impact threshold calibration and testing. Successfully demonstrated prototype functionality in simulated environments.
- Focused on reducing emergency response time for road accident victims. Aimed to enhance passenger safety in two-wheelers and cars.
- The project was appreciated for its practical relevance and cost-effective design. Recognized during project evaluation for real-world safety potential.