

AKKALA NAGA VARUN

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Career Objective

Driven and dedicated professional seeking to leverage technical skills and passion for innovation to contribute effectively to a dynamic organization's success.

Education

Course	School / College / University	Year of Passing	CGPA
B.Tech (CSE)	GITAM University, Visakhapatnam	2024	8.45
Intermediate (MPC)	Pavan Junior College, Vizianagaram	2020	8.34
10 th SSC	Sri Chaitanya EM School, Visakhapatnam	2018	9.0

Skills

- **Programming Languages:** *Python, Java, R, C++, HTML, CSS, JavaScript, SQL*
- **Development Tools:** *VS Code, Excel, PowerPoint, MySQL, Draw.io (UML), Jira, Power BI, Git*
- **Operating Systems:** *Windows, Linux*
- **Soft Skills:** *Research & Strategy, Problem Solving, Teamwork, Time Management*
- **Technical Expertise:** *Embedded Systems, React, Computer Vision, Iceoryx, ROS IPC Framework, Software Engineering Methodologies (SDLC, Agile, V-Model, Waterfall), Note-taking, Self-driven*

Experience

TATA ELXSI – Software Engineer Intern (Chennai) [View Certificate](#) Jan 2024 – Jun 2024
Business Unit: Transportation Business Unit (TBU) **Competency: ADAS & AD**

- Comprehensive understanding of **Vehicle Electronics Architectures**, including ECUs, Protocols (LIN, CAN, Flex, MOST), Infotainment, Body and Chassis Electronics, ISO 26262 Functional safety and Cyber Security.
- Gained specialized expertise in **Advanced Driver Assistance Systems (ADAS)** and **Autonomous Driving (AD)**, specifically contributing to the **Park by Memory (PBM)** project—an SAE Level 3 autonomous parking solution that enables vehicles to autonomously learn and replicate parking maneuvers.
- Led the migration of ROS-based communication protocols to **Iceoryx**, optimizing data transfer with zero-copy shared memory, achieving ultra-low-latency communication (under 1 μ s), and enhancing overall system performance.
- Collaborated on setting up complex simulation environments for vehicle models and sensor scenarios, visualizing object detection and planned path tracking via **RViz**, ensuring system accuracy in virtual testing environments.
- Successfully configured and built the PBM workbench by modifying and integrating complex **CMake-Lists**, ensuring seamless project deployment and execution on **Ubuntu** systems.
- Conducted **Hardware-in-the-Loop (HIL)** testing to validate real-world vehicle behavior in simulated environments, ensuring precise and reliable autonomous vehicle path execution during parking maneuvers.

AI-ML AICTE - EduSkills (AWS Academy) [View Certificate](#) May 2023 – Jul 2023

- Acquired foundational knowledge in **AWS Academy Cloud Foundations**, focusing on cloud computing models, delivery (**IaaS, PaaS, SaaS**) and deployment models (**public, private, community and hybrid**), and key AWS services including **EC2, Storage solutions, Load Balancing, Auto Scaling, CloudWatch**.

- Explored key concepts in **AWS Academy Machine Learning Foundations**, including **Artificial Intelligence (AI)**, **Deep Learning** frameworks, **Neural Networks**, and advanced topics such as **Convolutional Neural Networks (CNN)** and **YOLO** for real-time **Computer Vision** applications.

Projects

Real-Time Human Face, Emotion, Age, and Gender Detection System using Computer Vision Techniques and Pre-Trained Model (CNN) [View Paper](#) Aug 2023 - Feb 2024

- Developed an advanced detection system capable of recognizing human faces, classifying emotions, estimating age, and predicting gender utilizing **Python** and **OpenCV**.
- Leveraged state-of-the-art pre-trained **Convolutional Neural Networks (CNNs)** to achieve high **accuracy** in emotion recognition, age estimation, and gender prediction.
- Optimized for **real-time performance**, ensuring seamless interaction through a **user-friendly** graphical interface.
- Followed comprehensive steps: **Data collection**, **image preprocessing**, **model implementation** and **fine-tuning**, **real-time detection system development**, and **graphical interface creation**.

2048 Game

Aug 2022 - Nov 2022

- Created an engaging interactive **2048 game** using **Python** and the **Tkinter GUI toolkit**, focusing on enhancing **user experience** through **intuitive design** and **responsive controls**.
- Engineered and optimized **gameplay logic** for **tile manipulation**, including stacking, combining, and adding new tiles, resulting in smooth gameplay.
- Improved user engagement with a visually appealing, **color-coded grid system** that provides immediate feedback on tile values and scores.

Portfolio Website

[\[Visit Website\]](#)

- Designed and developed a comprehensive **portfolio website** using **HTML**, **CSS**, **JavaScript**, **React**, and **Vite**, effectively showcasing **technical skills** and **projects**.
- Integrated a real-time contact form for efficient communication and a versatile dark/light mode toggle, enhancing overall user experience and accessibility.
- Crafted an intuitive interface facilitating quick resume downloads and skill showcases, demonstrating proficiency in modern web development practices.

Certificates

- Oracle Cloud Infrastructure 2024 Generative AI Certified Professional [\[View Certificate\]](#)
- Cisco - Introduction to Cybersecurity and Cybersecurity Essentials [\[View Certificate\]](#)
- NPTEL - Data Science for Engineers [\[View Certificate\]](#)
- Google by Coursera - Data Analysis with R Programming [\[View Certificate\]](#)
- Coursera - Introduction to Web Development [\[View Certificate\]](#)
- Coursera - Software Development Processes and Methodologies [\[View Certificate\]](#)

Personal Details

Languages Known: English, Telugu, Hindi, Tamil
Date of Birth: 24 December 2002
Blood Group: B+
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