

Vallepu Anil Sahith

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EDUCATION

- National Institute of Technology, Warangal (NITW)** Warangal, India
Bachelor of Technology (B.Tech), Electrical and Electronics Engineering; CGPA: 6.5
- Chukka Ramaiah IIT Institute (Vijay Ratna Junior College)** Hyderabad, India
Intermediate SSC Class 12th; CGPA: 9.75

SKILLS SUMMARY

- Programming Languages:** C++, Python, JavaScript, SQL, Matlab.
- Developer Tools:** VS Code Studio, Spyder, PyCharm, Google Colab, Github, Power BI.
- Web Technologies:** HTML, CSS, React, Figma, Django, NodeJS, Flask, Streamlit, Gradio, Beautiful Soup.
- Databases and Cloud:** MySQL, SQLite, MongoDB, ChromaDB, Pinecone, Git, GCP, Docker, Kubernetes.
- Familiar with:** Data Structures and Algorithms, System Design, Computer Networks, Embedded Systems.

WORK EXPERIENCE

- Noccarc Robotics Pvt Ltd.** Jun 2024 - Present
Full-Stack ML Intern Pune, Maharashtra
 - Developing a real-time arrhythmia detection system for embedded patient monitors. The system uses a hybrid ML model (CNN-BiLSTM) to generate predictive masks for more than 8 different arrhythmia classes, achieving an accuracy of over 95 percent enabling real-time detection of heart abnormalities via alarms, facilitating immediate clinical decision-making and reducing response times in critical care settings.
 - The system includes a sequence diagram detailing data flow from ECG sensors to preprocessing modules. The architecture integrates front-end display modules, back-end data processing services, and model inference pipelines, enabling seamless operation on embedded hardware.
- Carelon Global Solutions, (Elevance Healthcare)** Jun 2023 - Aug 2023
Summer Intern - AI/ML Bangalore, Karnataka
 - Integrated PyTesseract for Optical Character Recognition (OCR) to extract text, OpenCV for image preprocessing to improve OCR accuracy, and YOLOv8 for object detection identifying and isolating specific regions of interest, processing nearly 700 documents per hour with 95 percent accuracy.
 - Implemented multi-threading and multi-processing techniques, Delivered a comprehensive solution integrating seamlessly with existing data workflows, providing a reliable and scalable solution for automating data extraction reducing processing time and cost by 90 percent.

PROJECTS

- Custom Stock Trend Predictor (Exploratory Data Analysis, Feature Engineering, Machine Learning):** Designed a web-based tool using Flask for technical analysis of stocks, displaying future predicted curves and numerical stock data. Analyzed different models forecasting and predicting the most accurate future stock prices. **Tech stack:** Python, HTML, CSS, JavaScript, Flask, Pandas and Numpy, Matplotlib, Scikit-learn, Keras.
- Smart ATS Resume Tracker (Data Pre-processing, Generative AI, Prompt Engineering):** Developed a resume matching system integrating Google Gemini Pro Large Language Model (LLM) for concise analysis and percentage-based evaluation of candidate resumes against job descriptions leading a 50 percent improvement in candidate shortlisting. **Tech stack:** Python, Streamlit, pdf2image, Google Gemini-Pro API .
- Quantum Perceptron for Pattern Classification (Quantum Computing):** Implemented an Artificial Neuron on IBM's Qiskit quantum simulator exploring its functionality and capabilities. Trained a 4 qubit perceptron using checkboard patterns for different numbers, evaluated its performance with various weight-input pairs and understand its behavior compared to a classical deep learning system. **Tech stack:** Python, Numpy, Matplotlib, Gradio, Qiskit.
- Medical Chat Bot (Front-End Development, Data Engineering, Large Language Models(LLMs)):** Developed a medical chatbot allowing users to input medical and health-related queries, which are processed to understand the context and retrieve relevant information from a large language model. **Tech stack:** Python, Flask, Meta Llama2 LLM, LangChain, Pinecone Vector DB.

POSITION OF RESPONSIBILITY

- Contributed as a member of Big Data, Analytics and Consulting Cell, BDACC** Nit Warangal
Led the organization of multiple events, including summer and winter schools for Data Science. Aug 2022 - May 2023
- Captained the Inter-NIT Volleyball team** Nit Warangal
Organized more than 10 different volleyball tournaments for students within the college. Aug 2022 - May 2023

ACHIEVEMENTS

- Secured JEE Mains 99.3rd percentile - was among 0.7 percent of all who appeared for this competitive exam.
- Ranked within the top 100 projects at the NASA AMES Space Settlement Contest in San Juan, Puerto Rico (2017)
- Solved 300+(Medium to Hard) DSA problems on Leetcode.