Sai Boddapati

Ongole,Andhra Pradesh

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EDUCATION

Vellore Institute Technology, Chennai **2023 – 2027**
B.Tech - Computer Science and Engineering - ***CGPA - 9.43*** *Chennai, Tamil Nadu*

Sainik School Kalikiri **2014 – 2021**
Class 10th *- 97.4%* ***Class 12th*** *- 96.6%* *Chittoor, Andhra Pradesh*

TECHNICAL SKILLS

Programming Languages: Python, C/C++, Java, R
Data Science Libraries: Pandas, NumPy, scikit-learn, TensorFlow, Keras, PyTorch, SQL, MATLAB
Machine Learning: Regression, Classification, Clustering, Time Series, Feature Engineering, Model Selection
Deep Learning: Neural Networks, CNNs, LSTMs, Transformers
Generative AI & LangChain: LangChain, LLMs, Prompt Engineering, Chains, Agents, Vector DBs
Natural Language Processing: NLTK, spaCy, BERT, SBERT
Competitive Programming: Data Structures, Algorithms
Relevant Coursework: Operating Systems, Computer Networks, OOPS, DBMS

EXPERIENCE

Samsung PRISM Research Program **Jul 2025 – Present**
Research Intern — Spoken LID (Ongoing) *Remote / India*

- Designing replayspoofed multilingual audio and training CNN/Transformer LID baselines.
- Applying domain adaptation & augmentation to improve robustness under adversarial conditions.

PROJECTS

Dynamic Pricing Engine for Urban Parking | Python, Data Analysis, ML, Visualization **2025**

- Built a dynamic pricing model with demand forecasting using 73 days of time-series data for 14 parking lots.
- Implemented three models: (1) Linear (occupancy-based), (2) Demand-driven (traffic, queue, events), and (3) Competitive (proximity-based using geospatial distance).
- Applied machine learning to refine demand estimation and optimize price sensitivity to real-time features.
- Visualized trends using Matplotlib and accelerated computations through vectorized NumPy operations.

Real-Time Fashion Image Similarity Search | Python, ResNet50, FAISS, scikit-learn, Streamlit **2025**

- Built a content-based fashion recommender using the Fashion Product Images dataset (44K images).
- Extracted visual features using a pretrained ResNet50 (ImageNet) model with GlobalMaxPooling2D, generating 2048-dimensional embeddings.
- Used KNN with Euclidean distance for top-5 fashion image similarity matching.
- Achieved sub-second similarity search over 40K+ items and deployed a real-time Streamlit app with upload and display functionality.

AI-Based Early Warning System for Oceanic Dead Zones | Python, Machine Learning **2025**

- Developed an AI-based early warning system to predict oceanic dead zones using CMEMS oceanographic data.
- Applied machine learning and deep learning models (Random Forest, Gradient Boosting, MLP) to forecast dissolved oxygen levels and classify hypoxic zones, maintaining an overall accuracy of 83%.
- Handled dataset imbalance using SMOTE and class weighting to improve model performance on hypoxic zone detection.

ACHIEVEMENTS & EXTRACURRICULAR

- National Semi-Finalist in **Flipkart GRiD 7.0**, a nationwide competition for early-career talent.
- Secured **4th place** in Bitwars 2.0 organized by Unstop, showcasing strong problem-solving skills.
- Selected among **3000 students nationwide** for the **Amazon ML Summer School 2025**.
- Competitive Programming Lead at **Newton School Coding Club**, VIT Chennai (Aug 2024 – Present).
- Active member of the **VIT Chennai Hockey Team**; represented the university in multiple intercollegiate tournaments.