YALLA ABHIRAM CHOWDARY

✉ yallaabhiramchowdary999@gmail.com — 🔗 linkedin.com/in/yalla-abhiram-chowdary/ — ⊙ github.com/y-abhiram — 📞 +91 6305518110
— Sri Satya Sai, Andhra Pradesh, India

Professional Summary

Aspiring **Data Engineer and Machine Learning Enthusiast** skilled in Python, data analysis, and AI-based automation. Experienced in developing predictive models, IoT-integrated intelligent systems, and data-driven solutions to solve real-world challenges.

Technical Skills

- **Programming Languages:** Python, C++ and C.
- **Machine Learning :** Supervised & Unsupervised Learning, Ensemble Learning, Model Evaluation & Tuning
- **Generative AI:** LLM Fine-Tuning, Retrieval-Augmented Generation (RAG)
- **Libraries & Frameworks:** Pandas, NumPy, Matplotlib, Seaborn, SciPy, Scikit-learn, Keras, TensorFlow, OpenCV
- **Tools:** GitHub, Hugging Face, Render, Docker, VScode, Jupyter Notebook, Excel, Google Colab ,OpenAI& Gemini APIs.
- **Database & Web Technologies:** SQL, MongoDB, Flask, HTML, CSS
- **Soft Skills:** Depth-oriented, Self-motivated, Problem Solving, Teamwork, Good Communication

Professional Experience

Antt AI Labs Private Limited — AI Intern *Aug 2025 – Oct 2025 — Bengaluru*

- Designed and deployed voice-controlled AI agents using the OpenAI platform and Gemini APIs for real-time automation.
- Integrated FastMCP-based robotic pick-and-place workflows, boosting operational efficiency by 25%.
- Gained hands-on experience with Action Transformers, SmolVLA, NLP, prompt engineering, and TypeScript for intelligent agent development.

IIT Tirupati — Research Intern *May 2025 – Jul 2025 — Tirupati*

- Explored the biomedical applications of BCIs, focusing on EEG and MEG devices to improve human-computer interaction.
- Developed a single-channel EEG-based framework for real-time mental state and stress classification.
- Extracted neurophysiological features (Beta/Alpha, Theta/Beta, spectral entropy) using advanced signal processing.
- Built an ensemble of XGBoost, LightGBM, and Random Forest models achieving 85% accuracy across five cognitive states.
- Applied SHAP-based explainability and deployed the system via Flask for live EEG prediction and visualization.

InternPe — Machine Learning Intern *Jan 2024 – Feb 2024 — Remote*

- Built predictive models for healthcare and automobile pricing using Python, Pandas, and Scikit-learn.
- Conducted preprocessing, feature engineering, and model tuning to improve predictive performance.
- Contributed to end-to-end development of ML pipelines supporting analytics and deployment tasks.

Projects

EEG-Based Stress Detection and Mental Workload Monitoring System ⬈

- Developed a multimodal stress detection system combining EEG signals, facial behavior (blink rate, emotion, head movement), and questionnaire inputs.
- Trained CNN and XGBoost models for cognitive state analysis and applied Mediapipe for real-time facial analytics.
- Deployed the complete Flask-based system on Render for live stress visualization and automated reporting.

AI-Powered Crop Recommendation and Smart Agricultural Advisory System ⬈

- Built an AI-IoT crop advisory system using soil, weather, and investment data for optimal recommendations.
- Trained Random Forest models for yield forecasting and dynamic decision support using real-time environmental data.
- Deployed the Streamlit-based application–Blynk integration for visualization and remote monitoring.

ExpressTune – AI Music Player Based on Facial Expressions ↗

- Built a real-time emotion-based music recommendation app using OpenCV and deep learning for facial expression analysis.
- Integrated emotion classification and playlist automation for personalized music experiences.

AI-Powered Predictive Analytics Models

- Developed regression and classification models for **car price estimation, diabetes detection, and IPL match prediction**.
- Utilized Python, Pandas, and Scikit-learn for end-to-end data preprocessing, model building, and evaluation.

Education

Bachelor of Technology *2020–2026*
Rajiv Gandhi University of Knowledge Technologies (RGUKT) – **IIIT RK Valley**

- **Major:** Electronics and Communication Engineering (CGPA: 8.4) — **Minor:** Machine Learning
- **Pre-University Course:** CGPA 9.8

Board of Secondary Education of Andhra Pradesh *2019–2020*
AP Model School & Junior College, Ramagiri — SSC (10th Grade) — CGPA: 10.0

Achievements

- **Inspire Award** – Awarded by the Ministry of Science & Technology for innovation in science.
- **Essay & Painting Competition Winner** – Recognized by the Ministry of Water & Resources.
- **Technical Champion** – Multiple technical quiz wins in college and school.
- **Winner at College-Level Hackathons** – Developed AI-IoT-based solutions, including an **AI-based Strabismus Detection system**, as part of an **IIT Tirupati** collaborative project.

Certifications

- SQL Certifications (HackerRank) — Basic, Intermediate
- Cyber Security Fundamentals Training — MyCyberly (Cybtree)
- Artificial Intelligence Fundamentals – IBM SkillsBuild
- Python for Data Science – Cognitive Class
- C, C++, MySQL, DSA, MATLAB –Great Learning
- Science Exhibition –Timbaktu Collective
- Game Development using Pygame – GUVI
- Data Mining for Data Science – Mind Luster
- Internal Smart India Hackathon 2024