PAVAN MAGADUM

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PROFESSIONAL SUMMARY

MCA student specializing in Machine Learning, Full-Stack Development, and AI-driven systems with hands-on experience in computer vision, LLM-based applications, and cloud deployment. Skilled in building scalable end-to-end solutions integrating ML models with backend services, authentication systems, and real-time data workflows. Passionate about sustainable and data-driven intelligent systems.

TECHNICAL SKILLS

Languages: Python, Java, C, JavaScript, SQL
Web Technologies: HTML, CSS, React, Flask, FastAPI, Streamlit
Machine Learning: Data Preprocessing, Feature Engineering, Classification & Regression, Model Evaluation (Precision, Recall)
Libraries: NumPy, Pandas, Scikit-learn, OpenCV, Matplotlib, Seaborn
Core Concepts: Object-Oriented Programming, Data Structures & Algorithms
Tools & Platforms: Git, GitHub, Firebase, vercel, Render, Power BI, Tableau

EXPERIENCE

Python Developer Intern – Algorithms365   Sep 2025 – Present
- Completed structured Python training covering data structures, control flow, functions, and exception handling.
- Applied object-oriented programming principles through real-world coding exercises.
- Developed console-based applications and improved problem-solving skills aligned with SDE preparation.

AI & ML Intern – Spherenex   Feb 2026 – Present
- Collected and annotated datasets for license plate detection using bounding box techniques.
- Trained and fine-tuned YOLOv8 model; evaluated performance using Precision, Recall, and mAP metrics.
- Built OCR pipeline with advanced image preprocessing for accurate text extraction.
- Integrated Firebase backend to implement complete AI detection-to-storage workflow.

PROJECTS

Climate-Aware Crop & Organic Fertilizer Recommendation System
- Developed ML models using Scikit-learn to predict optimal crops based on soil nutrients (NPK), pH, temperature, humidity, and rainfall data.
- Performed data preprocessing and feature analysis using Pandas and NumPy to improve prediction accuracy.
- Implemented rule-based organic fertilizer mapping based on soil nutrient deficiencies.
- Designed interactive Streamlit dashboard for real-time user input and visualization.
- Deployed the application on Render cloud platform for production-level accessibility.

PMind AI – Full-Stack LLM Powered Chatbot
- Built full-stack AI chatbot using Python and LLM APIs with multi-turn conversational context handling.
- Developed backend using FastAPI and integrated Firebase for real-time data storage and user management.
- Implemented Google Authentication for secure user login and session handling.
- Designed responsive frontend using React with modular architecture separating UI, API, and AI logic.

EDUCATION

Master of Computer Applications (MCA)   CGPA: 8.8 (Current)
Sir M. Visvesvaraya Institute of Technology, Bengaluru

Bachelor of Science (PMCs)   CGPA: 6.71
Government First Grade College, Chikkodi

PUC   70%
Raja Lakhamagouda PU College, Belagavi

Class 10   82.24%
Shri Saraswati English Medium High School, Ghataprabha