

PRAGADEESHWARAN T

AI/ML Engineer

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PROFESSIONAL SUMMARY

AI/ML Engineer with expertise in Machine Learning, Generative AI, and NLP. Built FarmChat, a RAG-based agriculture chatbot using FAISS, Sentence Transformers, and LLM. Skilled in Python, TensorFlow, Scikit-learn, LangChain, Hugging Face, PyTorch and REST APIs. Published researcher in AI-based Smart Agriculture, focused on building scalable AI solutions.

EDUCATION

Bachelor of Engineering — Computer Science and Engineering 2022 – 2026 (Expected)
M.P. Nachimuthu M. Jaganathan Engineering College, Chennimalai, Tamil Nadu | Anna University Affiliated

TECHNICAL SKILLS

Languages	Python (Primary), SQL
ML Algorithms	XGBoost, Random Forest, SVM, KNN, Logistic Regression, Decision Trees, AdaBoost, Gradient Boosting
ML Pipeline	EDA, Data Preprocessing, Feature Engineering, Feature Selection (RFE), Hyperparameter Tuning, Cross-Validation, Model Deployment
Data Processing	Pandas, NumPy, SMOTE, Encoding, Scaling, Outlier Handling, Missing Value Imputation
Deployment	Flask, REST API, Render.com, GitHub
Tools	Scikit-learn, Jupyter Notebook, Git, GitHub, VS Code
Web Skills	HTML, Bootstrap, JavaScript, React.js, Node.js, MongoDB
Learning	Deep Learning, Neural Networks, TensorFlow, Keras, LangChain, RAG, HuggingFace, PyTorch

PUBLICATION

"AIIntegrated Smart Agriculture Platform: A Web-Based Solution for Small and Marginal Farmers"
IJIRSET — Vol. 15, Issue 5, May 2026 | Impact Factor: 9.935 | Indexed: Google Scholar, Crossref, Mendeley, DOI | e-ISSN: 2319-8753

PROJECTS

AI Integrated Smart Agriculture Platform [Final Year — PUBLISHED]	2026
<i>React.js, Node.js, MongoDB</i> Live: project-seven-olive-50.vercel.app	
- Designed and developed a full-stack smart agriculture platform with AI-based query support, direct product marketing, and government resource access for small farmers. - Published research paper accepted in IJIRSET (IF: 9.935) documenting system architecture and outcomes.	
NeuralScan AI TensorFlow, Keras, Gradio, Python	2026
- Developed a CNN-based brain MRI tumor classification system for 4 tumor categories, achieving 98.66% accuracy. - Implemented Grad-CAM visualization to highlight neural network attention regions in MRI images. - Deployed trained model on HuggingFace Spaces for real-time brain tumor inference.	
FarmChat — AI Agricultural Chatbot	2026
- Developed a RAG-based chatbot for agriculture using FAISS and Sentence Transformers for semantic search. - Integrated Flan-T5/Gemini LLMs to generate context-aware responses from a custom knowledge base. - Built and deployed the solution using Hugging Face Spaces, React.js, and Vercel. - Tech Stack: Python, LangChain, FAISS, Hugging Face, Gradio, React.js, Vercel.	

CERTIFICATIONS

- AISECT AI/ML: Artificial Intelligence & Machine Learning — Capgemini CSR Initiative (Hands-on Training)
- ML Pipeline: End-to-End Machine Learning — Preprocessing, Training, Evaluation, Tuning