

Vallabhaneni Karthik

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Summary

Computer Science graduate with a builder's mindset – I take ownership of projects end-to-end, from architecture to deployment, without waiting for direction. Comfortable moving across the stack and picking up new tools fast, whether that's shipping a production system solo, diving into AI/ML when a problem calls for it, or turning raw data into decisions people can act on. Open to full-stack, backend, or data analyst roles where I can keep building things that are actually used, not just demoed.

Education

GITAM University

Bachelor of Technology, Computer Science and Engineering

Sep 2022 – Jul 2026

Experience

Full Stack Developer

RTEC Appliances Private Limited – www.rtecappliances.com

Jan 2026 – Mar 2026

- Built and deployed the full production e-commerce website for RTEC Appliances – covering catalogue browsing, checkout, and order management – by independently designing the backend, frontend, and deployment pipeline.
- Enabled secure online payments and automated order fulfillment by designing REST APIs in Python and integrating Razorpay for payments and Delhivery for shipping, removing manual steps from the order pipeline.
- Delivered a mobile-responsive, fast-loading storefront by configuring deployment on Vercel with a custom domain and production build settings.
- Maintained the full production codebase independently using Git and GitHub, managing version control end-to-end with no team support.

Student Intern – AI Virtual Assistant

INCOIS (Indian National Centre for Ocean Information Services) – (GitHub)

May 2025 – Jun 2025

- Built a document-based AI chatbot enabling natural language search across PDF, Word, and PPTX files – replacing manual keyword search – by developing a FastAPI backend integrated with LLaMA3 for query handling.
- Delivered accurate semantic retrieval across large document sets by implementing FAISS vector search with SentenceTransformers embeddings.
- Shipped a production-ready chat interface with dark mode, speech-to-text input, and source citation tracking, built in HTML/CSS and wired to the backend's retrieval pipeline.
- Secured the platform with role-based access control via admin authentication and file upload/management permissions, maintaining the codebase in Git throughout.

Projects

Digital Literacy Platform – DALMA – <https://github.com/Vallabhanenikarthik/DALMA>

- Designed and built an interactive web platform promoting online safety and digital education, featuring resource guides, threat assessments, and user feedback forms.
- Developed a fully responsive, dark-themed UI using HTML, CSS, and JavaScript optimized for desktop and mobile users.

Deepfake Media Detection using Hybrid CNN–RNN and PSO | github.com/Vallabhanenikarthik/projectfinal

- Developed a deep learning-based deepfake detection system using a hybrid Xception CNN and Bi-LSTM architecture to analyze spatial and temporal inconsistencies in videos.
- Implemented MTCNN-based facial localization and frame extraction pipeline for preprocessing and feature engineering.
- Integrated Particle Swarm Optimization (PSO) for automated hyperparameter tuning to improve model performance and reduce manual optimization effort.
- Built an interactive Streamlit-based forensic dashboard providing real-time video analysis, confidence scores, and frame-level predictions.
- Achieved 76.25% detection accuracy on the FaceForensics++ dataset using TensorFlow, OpenCV, and Python.

Skills

Languages: Python, JavaScript, Java, C, HTML, CSS

Frameworks and Libraries: FastAPI, SentenceTransformers, Pandas, Matplotlib, OpenCV

AI / ML: TensorFlow, LLaMA3, FAISS, OpenAI API, CNN, Bi-LSTM, PSO, Semantic Search, NLP

Tools and Platforms: Git, GitHub, Vercel, Streamlit, Razorpay, Shiprocket, Microsoft Power BI, Excel

Databases: SQL, MySQL, SQLite

Other: REST APIs, Version Control, Responsive Design, Agile

Certifications

Certified Data Analytics Essentials – Cisco

Certified LLM Security Professional (CLLMSP) – Red Team Leaders

AI Skills Fest 2026 – Microsoft

AI-Powered Audience Strategy for Digital Marketing – Adobe