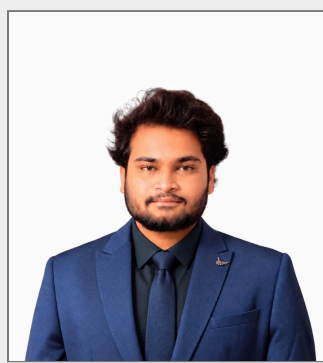


Address uppalapatijaswantcharith.vercel.app

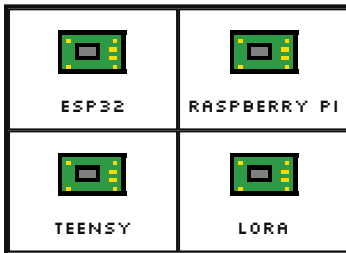
JASWANT-CHARITH



CEO - MANAVEX

WEBSITES BUILT: 11
PROJECTS: 6
PAPERS: 2

INVENTORY



Jaswant Charith Uppalapati

Computer Science Engineer · AI/ML & Robotics

CEO, MANAVEX · since Oct 2026

PHONE: +91 99087 80252

EMAIL: uppalapatijaswantcharith@gmail.com

BASED IN: Bengaluru, Karnataka, India

LINKEDIN: linkedin.com/in/u-jaswant-charithGITHUB: github.com/jaswant-uppalapati

PROFESSIONAL SUMMARY

Computer Science student specializing in Artificial Intelligence & Machine Learning, with a strong foundation in core Computer Science concepts including DBMS and Computer Networking. Experienced in building backend systems using Django and REST APIs, with a focus on designing practical and reliable software systems. Developed hands-on experience in Artificial Intelligence, Machine Learning, Computer Vision, IoT, and Robotics through academic, industry, and research-oriented projects, including work with ISRO's LEOS and AI-driven startup environments. Interested in building intelligent and autonomous systems by combining strong software engineering fundamentals with AI/ML, computer vision, and robotics.

EDUCATION

REVA University

Computer Science & Information Technology (AI & ML)
Bengaluru, Karnataka, India · 2023 - 2027
CGPA 8.03/10 (up to 3rd year) · 4th Year

Class XII / PUC

79.9%

Class X

9.8 CGPA

TECHNICAL SKILLS

Programming	Python, C++	Core Computer Science	DBMS, Computer Networking, Data Structures & Algorithms
Backend & APIs	Django, Django REST Framework, FastAPI, REST APIs	AI/ML	PyTorch, TensorFlow, Scikit-learn, NumPy, Pandas, NLTK
Computer Vision	OpenCV, YOLO	Databases	PostgreSQL, SQLite
Cloud & Infrastructure	AWS, Azure, Ubuntu, Docker	Embedded & Robotics	ESP32, Raspberry Pi, Teensy, PlatformIO, LoRa, NVIDIA Isaac Sim, ROS

EXPERIENCE

MANAVEX

India

An engineering studio building full-stack software, agentic AI, and connected IoT systems.

CEO · Oct 2026 - Present

- ▶ Sets product vision and turns client needs into solution plans, then leads the system and product design that delivers them.
- ▶ Lead, Product and Engineering; co-lead, Technology.
- ▶ Backend services, APIs and database structures; frontend, backend and external-service integrations.
- ▶ Code review, engineering standards and technical prioritisation.
- ▶ Business operations, client engagement and new opportunities.
- ▶ Systems shipped with production partners: **CropNow** (CropDesk, TheDotProject, NEST) and **ATEON Labs**.

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EXPERIENCE (CONTINUED)

Indian Space Research Organisation (ISRO)

Bengaluru, India

Laboratory for Electro-Optics Systems (LEOS)

Project Trainee, SRQG Division · Jun 2026 - Present

- ▶ Contributing to the **3/6-Axis Robotic Arm with Computer Vision for Faulty PCB Detection and PCB Inspection** project, focusing on robotic-arm software, simulation, control, and computer-vision components.
- ▶ Developed **Python**-based robotic-arm control and simulation software and gained hands-on experience with **NVIDIA Isaac Sim** for robotic simulation and experimentation.
- ▶ Worked with **YOLO**-based computer-vision models for PCB inspection and faulty-component detection within the robotic inspection workflow.
- ▶ Designed and developed internal software applications for LEOS, including **VISHVASYA**, **KARYADESH**, and **SFMS**, supporting internal engineering and organizational workflows.
- ▶ Built applications using **Django**, **REST APIs**, and **SQLite/PostgreSQL**, deployed on **Ubuntu**-based intranet infrastructure for internal use.
- ▶ Contributed to technical research and research-paper development under the guidance of scientists at ISRO LEOS.

CropNow

Bengaluru, India

Agritech Startup

AI/ML Intern, then Founder's Office Lead (Project & Strategic Relations), now Founder's Fellow · Oct 2025 - Present**Founder's Fellow** · Jun 2026 - Present**Founder's Office Lead (Project & Strategic Relations)** · Dec 2025 - Jun 2026**AI/ML Intern** · Oct 2025 - Jan 2026

- ▶ Progressed from an AI/ML internship into the Founder's Office and later a Founder's Fellowship, taking increasing responsibility across software engineering, product development, technical strategy, research, and organizational operations.
- ▶ Led the software engineering team for **NEST**, a **Taiwan Presidential Hackathon**-winning project, contributing across web applications, backend architecture, cloud infrastructure, and IoT firmware.
- ▶ Built backend systems using **Django**, supported cloud infrastructure on **AWS**, worked with **PostgreSQL**, and developed embedded firmware in **C++** using **PlatformIO**.
- ▶ Designed and developed **CropDesk**, a centralized software platform for CropNow's connected IoT ecosystem, supporting device management, data, analytics, and platform integration.
- ▶ Took product ownership of **AkashBhumi**, leading research, product ideation, planning, design, team coordination, and execution in collaboration with organizational leadership.
- ▶ Led cross-functional initiatives involving research, field operations, audits, strategic planning, and new-project development.
- ▶ Serve as **Head of the Data Security & Centralisation Committee**, contributing to organizational data centralization and security initiatives.

ACTIVITIES

Yantra · The IoT Club at REVA University · Bengaluru, India**Secretary** · Mar 2025 - Present**Event Coordinator** · Nov 2024 - Mar 2025

- ▶ Progressed from Event Coordinator to Secretary, taking increasing responsibility for technical activities and events within the university IoT club.
- ▶ Conducted IoT workshops and technical sessions for junior students covering sensors, microcontrollers, embedded systems, and practical project development.
- ▶ Worked on hands-on embedded and computer-vision projects involving **ESP32**, **LoRa**, **Raspberry Pi**, and **OpenCV**.
- ▶ Participated in a line-following robot competition, contributing to robot development and tuning.

PUBLICATIONS & RESEARCH

"Development of a Web-Based Process Life-Cycle Management Framework for Quality Assurance of Satellite Sensors"**NCRS 2026** · Abstract Accepted**"An Attention-Guided Multi-Plane Approach for Estimating Gestational Age from Fetal Brain MRI"****ML4H 2026** · Manuscript Submitted (Submission No. 80)

ACHIEVEMENTS

- ▶ **Winning Team**, Taiwan Presidential Hackathon
- ▶ **Founder's Choice Award**, CropNow (2025)

TIMELINE

Oct 2026	CEO, MANAVEX
Jun 2026	Project Trainee, SRQG Division, ISRO LEOS
Jun 2026	Founder's Fellow, CropNow
Dec 2025	Founder's Office Lead (Project & Strategic Relations), CropNow
Oct 2025	AI/ML Intern, CropNow
Mar 2025	Secretary, Yantra (The IoT Club at REVA University)
Nov 2024	Event Coordinator, Yantra
2023	Started at REVA University, Computer Science & Information Technology (AI & ML)

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Jaswant Charith Uppalapati

projects · websites built

PROJECTS

WEBSITES BUILT

▶ AQUA NEST

AI-Powered Aquaculture Intelligence Platform

- Developing an intelligent aquaculture monitoring platform combining IoT sensing, AI/ML, computer vision, cloud infrastructure, and web technologies.
- Designing an **ESP32**-based IoT system for collecting pond-water parameters through connected sensors and **RS485** communication.
- Building the software ecosystem across embedded firmware, **Django**, **REST APIs**, **MQTT**, **AWS**, and data pipelines.
- Developing toward intelligent capabilities for water-quality monitoring, fish-health prediction, and aquaculture decision support.

IoT · AI/ML · Embedded Systems · Cloud · Django

▶ SFMS

Software File Management System & NAS Platform

- Designed and developed a centralized software file-management and document repository platform for **CropNow**.
- Implemented structured file/folder organization, metadata management, versioning, and centralized document access.
- Built the application using **Django** with database-backed document and metadata management.
- Deployed the system on internal server infrastructure for centralized organizational access.

Django · PostgreSQL/SQLite · Server Infrastructure

▶ DIVINE Answer

RAG-Based NLP Application

- Built a **Retrieval-Augmented Generation (RAG)** application for comparing guidance and perspectives from the Quran, Bible, and Bhagavad Gita.
- Implemented semantic retrieval using **embeddings**, **vector search**, and cosine similarity, followed by **LLM**-based response synthesis.
- Developed the application using **Supabase**, vector search, **Edge Functions**, and LLM technologies.
- Achieved reported retrieval evaluation results including **0.9974** cosine similarity, **0.5000** MRR, and **0.6509** NDCG@5.

RAG · NLP · LLMs · Semantic Search · Full Stack

▶ PARAMETER

Animal Detection & Avoidance System

- Developed a real-time animal detection and avoidance system using **CNN**-based computer vision on **Raspberry Pi**.
- Integrated camera-based detection with hardware controls to trigger automated responses through relay-based mechanisms.
- Designed activity logging for post-event analysis and optimized the system for practical field operation.

Computer Vision · Embedded Systems · IoT

▶ SANKETHA

Secure LoRa Communication Device

- Built an offline, long-range, low-power communication system using **ESP32** and **LoRa**.
- Designed device-to-device communication capable of operating without conventional internet infrastructure.
- Integrated embedded hardware and communication modules for wireless data transmission and field testing.

Embedded Systems · IoT · Wireless Communication

▶ LaXi

Modular AI & Robotics Platform

- Developing a modular AI and robotics platform designed to provide reusable AI capabilities across computers and robotic devices.
- Exploring a capability-based architecture where modules such as device control, computer vision, and **RAG** can be integrated as reusable applications.
- Designing support for cloud and local AI models and future deployment on platforms such as **Raspberry Pi**-based robots.

AI/ML · Robotics · LLMs · Python · Django

WEBSITES BUILT

SITE	ADDRESS	GROUP
 CropNow	cropnow-omega.vercel.app/about	CropNow
 CropDesk	cropdesk.in	CropNow
 Nest	crop.cropdesk.in	CropNow
 Seed	seed.cropdesk.in	CropNow
 Kairoman	kairoman-cropnow.vercel.app	CropNow
 ab.cropdesk.in	ab.cropdesk.in	CropNow
 MANAVEX	manavex.vercel.app	MANAVEX
 The Dot Project by Kabeer	thedotprojectbykabeer.com	MANAVEX
 p1al.vercel.app	p1al.vercel.app	MANAVEX
 QuadricIT	quadricit-website.vercel.app	MANAVEX
 Krishna Kumhari	krishna-kumhari.vercel.app	MANAVEX