



Sarvesh Raam T K

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Profile

AI and software engineering student with internship experience in industrial automation and applied AI, building backend systems, data pipelines, and web applications. Pursuing dual degrees in Artificial Intelligence (SRM) and Data Science (IIT Madras).

Internship Experience

Renault Nissan Technology & Business Centre India

Jun – Dec 2025

Research Intern – Applied Industrial AI

- Built **PackAssist** – a 3D trunk space optimizer for automotive vehicles using React Three Fiber for real-time 3D visualization and FastAPI for bin-packing; deployed on Vercel, used by 40+ engineers.
- Implemented real-time NDJSON streaming to deliver live packing progress feedback, cutting optimization wait time and improving usability for end users.

Tube Products of India (Murugappa Group)

Jan 2026 – Present

Automation & AI Intern

- Designed and deployed the **Wet Process** automation system in Python, replacing manual data entry with automated industrial data processing.
- Optimized SQL queries and data pipelines for trend analysis, reducing report generation time by ~50% and improving operational reliability across 5+ production processes.

Projects

trust-flow — Agentic Customs Compliance Pipeline

Built a 13-node LangGraph pipeline that automates customs invoice reconciliation, processing a document pair end-to-end in under 15 seconds. Handles OCR, AI-based field extraction, HS code lookup, and US/UAE compliance checks with human review support and SQLite audit logging.

Tech Stack: Python, LangGraph, Groq (Llama-3.3-70B), Docling, Instructor, SQLite

ARIA — Financial Risk Detection Platform

A 4-agent AI platform that reads financial documents and generates risk reports in under 30 seconds. Chunks and embeds uploaded PDFs into ChromaDB, then queries Llama-3.3-70B for risk analysis across document, risk, news, and report agents.

Tech Stack: TypeScript, Next.js, Python, FastAPI, ChromaDB, Groq (Llama-3.3-70B)

explainable.ai — Healthcare AI Interpretability

Compared Random Forest, Logistic Regression, and XGBoost on the Cleveland Heart Disease dataset using SHAP and LIME to explain individual predictions. Built a web app where doctors can ask questions and get plain-English explanations of model decisions.

Tech Stack: Python, SHAP, LIME, Scikit-Learn, XGBoost, Flask

Vision-NLP — Image Captioning System

Custom image captioning model using ResNet50 as a visual encoder and a 6-layer Transformer decoder with beam search. Trained and evaluated with BLEU-4 score; deployed as a Flask web app for live caption generation from images.

Tech Stack: Python, PyTorch, Transformers, Computer Vision, Flask

Skills

Languages: Python, TypeScript, Java, C++

Backend: Node.js, FastAPI, REST APIs, Docker, LangGraph

Database: MySQL, PostgreSQL

Frontend: React.js, React Native, Three.js, HTML, CSS, JavaScript

Tools: Git, GitHub, Firebase

Education

SRM Institute of Science and Technology

2023 – Present

B.Tech in Artificial Intelligence

CGPA: 8.08

Indian Institute of Technology (IIT), Madras

2026 – Present

B.S. in Data Science and Applications

GEM International School, Tiruppur

2021 – 2023

Certifications

- Salesforce Certified: Agentforce Specialist
- SAP Certified: SAP Generative AI Developer