

YASH VARMA

Product Engineer: Full Stack, Applied AI & Automation

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Professional Summary

Product Engineer who turns ambiguous problems into software people can actually use. I build end to end products across Full-Stack Engineering, Applied AI and Automation, from first prototype to production. At ConnectWise, I built a RAG issue analysis platform ingesting over 10,000+ Jira tickets, cutting manual triage time by 75%. I've shipped client facing systems, won 10+ hackathons, published research, and now pursuing MSc in Computer Science at UCD.

Education

University College Dublin

MSc in Computer Science (Negotiated Learning)

Dublin, Ireland

Sep 2026 – Sep 2027

- **Relevant Coursework:** Distributed Systems, Software Engineering, Advanced Machine Learning, Multi-Agent Systems, Big Data Programming, and Advanced Data Structures with Java.

SIES Graduate School of Technology (University of Mumbai)

Bachelor of Engineering in Artificial Intelligence & Machine Learning (CGPA: 8.95/10.00)

Mumbai, India

Aug 2022 – Jun 2026

- **Relevant Coursework:** Data Structures & Algorithms, Analysis of Algorithms, Operating Systems, Computer Networks, Computer Architecture, Databases, Cloud Computing, Machine Learning, Deep Learning, Image & Video Processing.

Technical Skills

Languages: Python, TypeScript, JavaScript, Java, C, C++, SQL, HTML, CSS

Backend, Web & Mobile: Next.js, React.js, React Native, Node.js, Nest.js, Express.js, FastAPI, Flask, Electron.js, REST APIs, Microservices, Socket.IO, Tailwind CSS, Figma

AI, ML & Deep Learning: PyTorch, TensorFlow, Keras, Transformers, LLM Orchestration, RAG Pipelines, Fine Tuning (LoRA, PEFT, SFT), BERT, XGBoost, Sentence Transformers, Computer Vision, Hyperspectral Image Classification

Agentic Frameworks & APIs: CrewAI, LangChain, LlamaIndex, Eliza OS, OpenAI API, Groq API, Sarvam AI, PaddleOCR, Microsoft Graph API, Twilio

Databases & Data Systems: PostgreSQL, MongoDB, Redis, MySQL, SQLite, Supabase, OpenSearch, Vector Databases

Cloud, DevOps & Infrastructure: AWS (Academy Cloud Foundations), Google Cloud Platform (GCP), Microsoft Azure, Docker, Cloudflare Workers, GitLab CI/CD, GitHub Actions, Linux, DigitalOcean, Vercel

Professional Experience

Founding Software Engineer

Norrio

May 2026 – Jul 2026

UK (Remote)

- Designed and launched core B2B payment processing and internal dashboard workflows handling foreign exchange (FX) conversions and merchant account reconciliation using **Next.js** and **Nest.js**.
- Deployed low-latency serverless services on **Cloudflare Workers** and integrated **Socket.IO** for real time transaction and account state notifications.
- Built a multilingual content and localization pipeline connected to **Sanity CMS** and the **OpenAI API**, implementing **Redis server side caching** to reduce repeat external translation API hits by ~90%.

Engineering Intern

ConnectWise

Jun 2025 – Jul 2025

Mumbai, India (On-Site)

- Built a **RAG based issue analysis dashboard** using **Python** and **Next.js** over **10,000+ organization wide JIRA tickets**, reducing manual ticket lookup and root cause triage time by ~75%.
- Engineered a cron scheduled data ingestion pipeline synchronizing **10,000+ ticket records** with incremental delta updates and fault tolerant retry behaviour.
- Owned the full software lifecycle across prototyping, modularization, unit testing, and automated deployment via **GitLab CI/CD**.

Software Development Engineer Intern

Cartman Labs (Slaps)

Jan 2025 – Feb 2025

San Francisco, USA (Remote)

- Shipped an autonomous X/Twitter social media agent service using **Next.js**, **Python**, **MongoDB**, and the **Eliza OS** open-source framework capable of automated content scheduling and user interaction.
- Built a **Web3 authenticated community platform** using **Next.js** and **PostgreSQL** deployed across **DigitalOcean virtual machines**, **GCP OAuth**, and **Vercel deployments**, maintaining ~99.5% service uptime and sub 200ms API response times.

Full-Stack & AI Engineer Intern

EaseworkAI

Apr 2024 – Jul 2024

Canada (Remote)

- Automated supplier buyer procurement email workflows end to end using **CrewAI** multi-agent orchestration, **Microsoft Graph API**, **FastAPI**, and LLMs, achieving ~60% faster response turnaround.
- Deployed backend services and relational/NoSQL databases (**MySQL**, **MongoDB**) on **Google Cloud Platform (GCP)**, making supply chain workflow data queryable across the team.

Research, Publications & Intellectual Property

- **S2VNet-CA: Cross Attention Enhanced Subpixel Spectral Variability Network (First Author, Final Year Thesis Manuscript in Preparation, 2026):** Inserted a bidirectional Spectral Pixel Cross Attention (SPCA) mechanism between a nonlinear autoencoder spectral unmixing branch and a VisRetNet spatial branch for hyperspectral classification under scarce labels. Combined residual connections and cross attention regularization to preserve abundance non negativity and sum to one constraints. Achieved better accuracies on standard fixed splits as compared to the older models.
- **Attention Enhanced Speaker Representation with Contrastive Learning (Co-author, Published at IEEE ICCUBEA 2025):** Developed an attention enhanced speaker recognition and representation pipeline using contrastive learning.
- **Advanced Fake News Detection Using BERT and Ensemble Learning (Co-author, Accepted Conference Paper at Springer ICDSM 2024):** Combined contextual BERT representations with Naive Bayes, Passive Aggressive, and Logistic Regression ensemble classifiers, achieving **~95% accuracy** on the 72,000 article WELFake dataset.
- **Dimension Capture (Registered Software Copyright, 2025):** Engineered an ArUco marker computer vision measurement system measuring single and multi object dimensions from 10 cm to 5 m within **2 mm accuracy** at **~90% lower cost** than LiDAR.

Selected Engineering Projects

Kavach.ai: Malware Analysis & Threat Triage Desktop Suite *1st Place, GajShield Hack 8 (2,000+ Participants)*
Stack: Electron.js, Python, Flask, Docker, XGBoost, LLaMA 3.2

- Detonates suspect binaries inside an isolated, disposable **Docker sandbox**, fusing static file entropy analysis, dynamic rule based syscall flagging, and an **XGBoost** classifier trained on **~184 GB of malware byte data** with pseudo soft labelling.
- Integrated **LLaMA 3.2** to translate technical call stack and classifier telemetry into plain language security verdicts and validated live on GajShield malware samples during judging.

LoanSaathi: Multilingual AI Loan Assistant *1st Place, Great Bengaluru Hackathon (~5,000 Participants)*
Stack: FastAPI, Next.js, MongoDB, Supabase, Mistral Saba 24B, Fine Tuned FinLLaMa, PaddleOCR, Sarvam AI

- Built a 24 hour multimodal conversational assistant that extracts loan documents via **PaddleOCR**, identifies predatory clauses using **Mistral Saba 24B** and fine tuned **FinLLaMa**, and guides eligibility and EMI calculations across 8 Indian languages.
- Designed privacy first ephemeral session workflows in **Supabase** so processed loan documents are automatically discarded after session completion.

SeaGuard: Maritime Safety & Fishing Zone Assistant *Most Product Readiness, Hackcelestial 2.0 (250+ Participants)*
Stack: React Native, FastAPI, TensorFlow, Python, Supabase, Sarvam AI

- Architected a mobile assistant predicting Potential Fishing Zones (PFZ) at **~97% accuracy** from satellite and weather telemetry using **TensorFlow**, paired with SOS alerts, GPS maritime boundary warnings, catch logging, and multilingual voice access and exhibited to the **Chairman of ISRO** in 2025.

Intelligent Cooperative Q&A Agent System *2nd Runner Up, AMD AI Sprint @ IIT Bombay (~200 Participants)*
Stack: Qwen-3 4B, LLaMA 3.2 3B, PyTorch, Supervised Fine Tuning (SFT), Synthetic Data, AMD GPUs

- Built and fine tuned two cooperating agents under a 24 hour AMD GPU constraint: a Question-Generator (**Qwen-3 4B**) trained on domain texts and OEIS data, and an Answer Solver (**LLaMA 3.2 3B**) using multi pass verification, achieving **~10s** question generation and **6 to 7s** answer latency.

Awards

- **Hackathons & Competitive Programming (10+ Wins):** 1st Place at **KJSCE Hack 8** (2025), 1st Place at **Great Bengaluru Hackathon** (2025), 1st Place at **Datathon 24** (2025), Most Product Readiness at **Hackcelestial 2.0** (2025), 2nd Runner Up at **AMD AI Sprint IIT Bombay** (2025), 1st Runner Up at **Hackanova 3.0** (~2,500 participants, 2024), 1st Place at **Cognition SIES GST** (2024), 3x Winner of **Smart India Hackathon (SIH) Internal** (2023, 2024, 2025), Top 12 of 50 Finalist at **Sarvam BuildIn' Hours** (2026), Global Rank #646 in **Newton School CP Challenge** (2023), Top 20 in **CodeChef Turing Cup** (2023).

Leadership

Technical Lead 2024–2025
E-Cell SIES GST

- Led Full-Stack development of internal platforms and mentored **20+ junior developers** on system design, deployment workflows, and agile execution.

Competitive Programming Coordinator 2023–2024
Arena SIES GST

- Curated **50+ algorithmic problems**, organized contests for **~500 participants**, and conducted code submission reviews.

Certifications

- **Certifications:** AWS Academy Graduate: AWS Academy Cloud Foundations (2025), Supervised Machine Learning: Regression and Classification (Stanford / DeepLearning.AI, 2024), Google Cloud Computing Foundations & Generative AI Badges (Google, 2023).