Shyam J | AI/ML Engineer & Full-Stack Developer

Chennai, Tamil Nadu, India

📞 +91 7395980045 • ✉ jshyam2005@gmail.com • ⦿ SHYAM140305

in shyam-jayakanthan-050a85284 • 🌐 shyamj.vercel.app

Professional Summary

AI/ML Engineer and Full-Stack Developer with hands-on experience across generative AI, digital twins, computer vision, and applied machine learning. Completed **6+ internships** at leading organisations including Sentient Scripts, Renault Nissan (RNAIPL), Mercedes-Benz MBition (Berlin), Chennai Metro Rail Limited (CMRL), and Tata Steel. Proven experience building ML pipelines, RAG systems, predictive maintenance models, and deploying full-stack AI solutions for industry users.

Research Interests

Agentic AI, Reinforcement Learning, Generative AI, Digital Twins, Industry 4.0, Statistical modelling, and AI-powered automation.

Technical Skills

Languages: Python, C, Java, TypeScript, JavaScript, SQL, Dart

Frontend: React.js, Next.js 14, Tailwind CSS, Bootstrap, HTML5, CSS3

Backend: Node.js, Flask, Express.js, REST APIs

AI/ML: PyTorch, TensorFlow, Keras, Hugging Face, Scikit-learn, RAPIDS cuML, FAISS, RAG systems, OpenCV

Analytics: Pandas, NumPy, Matplotlib, SPSS, Power BI, Hypothesis Testing

Cloud/DevOps: AWS, Oracle Cloud, Docker, Git, CI/CD, Serverless, Streamlit, Vercel

Databases: MongoDB, SQLite, Redis

Tools: VS Code, Postman, AutoCAD, Canva, Figma, BeautifulSoup, PyTesseract

Domains: Machine Learning, Deep Learning, NLP, Computer Vision, Digital Twin, Industry 4.0

Professional Experience

Sentient Scripts Pvt. Ltd.   **Remote**
Student Coordinator / HR Lead   *Jun 2024 – Jun 2025*
Primary POC for SRM University collaboration

○ Coordinated student recruitment, profiling, shortlisting, interview scheduling and onboarding for multiple project batches.

○ Managed documentation and stakeholder communications for 100+ student profiles.

○ **Technical Contribution:** Led development of a Generative-AI humorous weather chatbot (full-stack), integrating LLM responses and front-end UX.

Sentient Scripts Pvt. Ltd.   **Remote**
AI Intern   *Apr 2024 – Oct 2024*

○ Built a Retrieval-Augmented-Generation (RAG) Weather Chatbot achieving 89% user satisfaction.

○ Integrated OpenWeatherMap API, implemented semantic retrieval with FAISS, and optimised LLM inference latency by 45%.

○ Deployed a Streamlit dashboard to monitor user interactions and system health.

Renault Nissan Automotive India Pvt. Ltd. (RNAIPL)   **Hybrid**
AI/ML Intern   *Apr 2024 – Oct 2024*

Guided by Mr. Harishankar Girirajan

○ Developed Power BI dashboards for Milkrun route optimisation to improve supply-chain visibility.

○ Implemented analytics pipelines that reduced routing delays and improved operational reporting.

Chennai Metro Rail Limited (CMRL)   **Hybrid**
AI Intern   *Dec 2024 – Apr 2025*
In collaboration with Mr. Ganavel, Centre of Excellence Cooling Lab

○ Built predictive maintenance and fault-tolerance models using ML and statistical approaches.

○ Designed an NLP pipeline to extract and index fault codes from PDF manuals (95% extraction accuracy).

○ Delivered a Streamlit-based troubleshooting tool adopted by 50+ internal users for day-to-day diagnostics.

Tata Steel   **Remote**
AI/ML Intern   *Jan 2025 – Jun 2025*
Under supervision of Mr. Dhilip Kumar R

○ Implemented computer vision pipelines for ring and rib analysis in steel bars for automated quality assessment.

○ Automated dimensional measurement and reporting using CNN-based feature extraction and image preprocessing.

Mercedes-Benz MBition   **Berlin, Germany (Remote)**
AI/ML Intern   *Nov 2024 – Apr 2025*
In association with Mr. Karthik V

○ Contributed to Digital Twin optimisation workflows for NVIDIA Parker hardware simulations.

○ Helped design AI-driven optimisations to improve simulation runtime and fidelity.

Education

SRM Institute of Science and Technology   **Kattankulathur**
B.Tech in Artificial Intelligence, CGPA: 7.5/10

○ Relevant coursework: Machine Learning, Deep Learning, Computer Vision, NLP, Data Structures & Algorithms, Database Systems, Software Engineering, Reinforcement Learning, Cloud Computing

St. Michael Academy   **Chennai**
Higher Secondary & Secondary Education, Grade 12: 64% | Grade 10: 74%

Certifications

Professional: Generative AI Professional (2024); Oracle Cloud Infrastructure GenAI (2024)

Online: AWS Machine Learning; Python for Data Science; AWS Cloud Foundations

Projects and Research

AI Educational Assistant
Edu Smart Bot   *Feb 2025 – Jun 2025*
○ Built OCR + transformer summarisation + context-aware Q&A using BERT and T5.

○ Developed backend (Flask) and frontend (React.js); deployed on Vercel with PostgreSQL backend.

Autonomous Driving
Self-Driving Car AI Simulation   *Feb 2025 – Jun 2025*
○ Implemented Deep Q-Learning agent with CNN-based perception for lane detection and navigation in Unity3D.

Vision-Language Model
Image Captioning System   *Feb 2025 – Jun 2025*
○ Built a CNN–LSTM encoder–decoder with attention; achieved BLEU-4 score of 0.32 on MS COCO subsets.

Tamil Computing Centre (TCC), SRMIST   **Chennai**
In-House Research   *2025*
○ Developed Tamil language models, CNN-based OCR pipelines, and AR/VR visualisation for Tamil literature in collaboration with INFITT and SRM Computational Intelligence.

Achievements & Hackathons

- **Hackstreet 3.0 (2025)** — 1st Place for real-time AI automation system with vision analytics.

- **Appathon 2.0 (2025)** — Winner (150+ teams) for AI-driven productivity application.

- **Tamizh-A-THON 1.0 (2025)** — Winner for Tamil OCR & NLP innovation under SRM TCC.

Leadership Experience

NEXT GEN AI, SRMIST KTR
President   *2025 – 2026*
- Leading 400+ members; driving industry partnerships and academic outreach.

NEXT GEN AI, SRMIST KTR
Vice President   *2024 – 2025*
- Organized 5 flagship events; managed annual budget of ₹1,00,000.

AI Research Group
Technical Lead   *2023 – 2024*
- Supervised an 8-member research team; mentored peers in ML and CV techniques.

CINTEL Students Association, SRMIST
Research Member   *2023 – 2024*
- Conducted AI research and contributed to departmental projects.

Additional Information

Languages: English (Fluent), Tamil (Native), Hindi (Conversational), Telugu (Fluent)

Professional Skills: Leadership, Team Management, Problem Solving, Critical Thinking, Communication, Time Management