

# Shyam J

AI/ML Engineer & Full Stack Developer

Chennai, Tamil Nadu, India

+91 7395980045

jshyam2005@gmail.com

SHYAM140305

shyam-jayakanthan-050a85284

## Professional Summary

Results-driven AI/ML Engineer with expertise in developing end-to-end machine learning systems, generative AI applications, and full-stack solutions. Proven track record in implementing NLP-based troubleshooting systems, RAG-powered chatbots, and computer vision applications.

## Research Interests

Computer Vision, Deep Learning, Representation Learning, Reinforcement Learning, Efficient and Accelerated Machine Learning, Generative Models, Applied Statistics, Natural Language Processing, Digital Twin Systems, Computer Vision for Industry 4.0, Cloud-Based AI Deployment, and AI-Powered Automation.

## Technical Skills

**Languages:** Python (Advanced), C (Intermediate),

Java (Basics), TypeScript, JavaScript, SQL, Dart

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

**Backend:** Node.js, Flask, Express.js, RESTful APIs

**AI/ML Frameworks:** PyTorch, TensorFlow, Keras, RAPIDS (cuDF/cuML), Scikit-learn, Hugging Face, FAISS, OpenCV, NLTK

**Data Science & Analytics:** Pandas, NumPy, Matplotlib, Seaborn, SPSS, Statistical Analysis, Hypoth-

esis Testing, RAPIDS cuML, Power BI

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

**Databases:** MongoDB, SQLite, Redis

**Tools & Libraries:** Jupyter, VS Code, Postman, AutoCAD, Canva, Figma, Beautiful Soup, PyTesseract, Pygame

**Domains:** Machine Learning, Deep Learning, Generative AI, Computer Vision, NLP, Reinforcement Learning, Digital Twin, Statistical Modeling

## Professional Experience

Jun 2024 – **Student Coordinator (HR / Administrative Coordinator)**, Sentient Scripts, Remote

Jun 2025 **University Collaboration Initiative:**

- Primary POC between Sentient Scripts and SRM University for projects and communication.
- Consolidated student profiles, scheduled interviews, and coordinated shortlisting.
- Managed student engagement ensuring timely progress and deliverables.

Dec 2024 – **Student Intern, Chennai Metro Rail Limited (CMRL)**, Chennai, India

Present **AI-Driven Troubleshooting System:**

- Extracted fault codes from PDF manuals using NLP (95% accuracy).
- Implemented FAISS semantic search with Gemma 2B LLM for contextual analysis.
- Developed Streamlit UI serving 50+ daily users.

Apr 2024 – **Student Intern (AI/ML Engineer)**, Sentient Scripts, Remote

Oct 2024 **Weather Chatbot with RAG:**

- Developed Retrieval-Augmented Generation chatbot (89% user satisfaction).
- Integrated OpenWeatherMap API with LLMs reducing latency by 45%.
- Built Streamlit dashboard increasing engagement by 25%.

Apr 2024 – **Student Intern (AI/ML Engineer)**, Renault Nissan Automotive India Pvt. Ltd., Chennai,  
Oct 2024 India

#### **Heavy Repair Management System:**

- Implemented role-based access supporting 200+ users.
- Improved workshop efficiency by 28% and reduced repair time by 22%.

## **Education**

**B.Tech in Artificial Intelligence**, SRM Institute of Science and Technology, Kattankulathur, India, CGPA: 7.5/10.0

Ongoing

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

**Grade 10 and Grade 12**, St. Michael Academy, Chennai, India

Grade 10: 74%, Grade 12: 64%

## **Certifications**

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

Online: Machine Learning (Stanford), Deep Learning (Andrew Ng), Python for Data Science (IBM), React.js Fundamentals (Meta)

## **Research and Projects**

Feb 2025 – **Edu Smart Bot**, AI-powered Educational Assistant, Technologies: Python, NLP, Flask, Jun 2025 React.js, PostgreSQL

- Built AI assistant integrating OCR, summarization, and context-based Q&A.
- Developed transformer pipeline (BERT, T5) for content summarization.

Feb 2025 – **Self-Driving Car AI Simulation**, Autonomous Driving Simulator, Technologies: PyTorch, Jun 2025 Unity3D, CUDA

- Implemented Deep Q-Learning for vision-based navigation and lane detection.

Feb 2025 – **Image Captioning System**, Vision-Language Model, Technologies: PyTorch, CNN, LSTM, Jun 2025 MS COCO

- Designed CNN–RNN architecture with attention; achieved BLEU-4 = 0.32.

## **Hackathon Achievements**

- **Hackstreet 3.0 (2025)** — 1st Place for real-time AI automation solution with vision analytics.
- **Appathon 2.0 (2025)** — Winner for AI-driven productivity app (150+ teams).
- **Tamizh-A-THON 1.0 (2025)** — Winner for Tamil OCR and NLP innovation under SRM TCC.

## **Leadership Experience**

2025 – **President**, NEXT GEN AI, SRMIST KTR

Present ○ Directed organizational strategy for 400+ members and industry partnerships.

2024 – 2025 **Vice President**, NEXT GEN AI, SRMIST KTR

- Led 350+ members, organized 5 events, and managed 1,00,000 budget.

2023 – 2024 **Technical Lead**, AI Research Group

- Supervised team of 8 researchers and coordinated industry hackathons.

2023 – 2024 **Research Member**, Cintel Students Association, SRMIST KTR

- Conducted AI research and mentored students on emerging technologies.

## Additional Information

Languages	English (Fluent), Tamil (Native), Hindi (Conversational), Telugu (Fluent)
Professional Skills	Leadership, Team Management, Problem Solving, Critical Thinking, Communication, Time Management
Technical Interests	AI Research, Open Source Contribution, Technical Writing, Public Speaking
2024 – 2025	<b>In-House Research Projects</b> , <i>Tamil Computing Centre (TCC), SRMIST, Chennai, India</i> Developed Tamil Language Models, CNN-based OCR pipelines, and AR/VR literature visualizations in collaboration with INFITT and SRM Department of Computational Intelligence.
Expected	<b>Publication</b>
2025	Preparing paper " <i>Efficient Fault Analysis in Industrial Systems using AI</i> ".
Ongoing	<b>Volunteer Work</b> Mentoring students in AI literacy and contributing to open-source AI projects.