Jai Shankar Krishna Murthy Neelavathi

Liverpool, UK | jaishankarkn99@gmail.com | +44 7818 143535
www.linkedin.com/in/jai-shankar-krishna-murthy-neelavathi-149148198
Student Visa - Right to work full time in UK post May 2026

Profile

I'm a Master's student in Data Science and AI with three years of industrial experience in developing efficient and scalable AI solutions across both product and service-based companies. Recognized with the Rising Star and Customer Appreciation awards, I take pride in building AI systems that deliver real-world impact. My research has led to a published paper and an IEEE National Level Best Project Award, reinforcing my mission to create responsible, high-performing AI that bridges innovation and societal progress.

Experience

Senior AI Engineer *Mar 2025 – Aug 2025*
Flam (Startup), India

- Gained experience coordinating a 10-member team and guiding three junior colleagues.
- Developed skills in researching AI problems and designing effective solutions.
- Learned to productionise and deploy code according to PEP8 and industry standards.
- Strengthened my ability to analyse ethical and legal product liabilities.

Hyper realistic human placement in image *Jun 2025 – Aug 2025*
Developed a framework that seamlessly places a human subject into a different background and blends it naturally with the environment. Utilised Flux fine-tuned models in combination with the IC Light model to generate realistic lighting and shadows, along with basic image processing techniques to smooth the borders. Delivered the project one week ahead of schedule along with GPU management, reducing the expected GPU cost by approximately 35%. Technologies used included Docker, Python, PyTorch, and FastAPI.

Wall paint visualiser *Mar 2025 - May 2025*
Developed a wall detection and paint visualisation pipeline using YOLOv11 and a fine-tuned Stable Diffusion model, respectively. The pipeline accurately visualised walls with the desired paint colour, accounting for light reflections on reflective surfaces as well. I implemented and deployed the solution using Docker, Python, PyTorch, FastAPI, and LitServe. The proof of concept led to a client contract worth approximately £42,500.

Senior AI Engineer *Nov 2021 – Mar 2025*
TATA Elxsi Limited, India

- Developed my ability to conduct literature reviews and apply critical thinking to solve tasks.
- Enhanced my communication skills through weekly interactions with Japanese clients to clarify and update requirements.
- Learned to break down high-level tasks into actionable subtasks and propose optimal plans.
- Gained experience ideating and creating proof-of-concept solutions for internal projects.

Project tracker and visualiser using generative AI *Jul 2024 - Feb 2025*
Developed a multi-agent framework using OpenAI GPT models to capture user inputs, update project progress, and generate reports. Integrated NeMo Guardrails to prevent prompt attacks and used vector databases for data analysis, storage, and retrieval. The system reduced overall reporting and analysis time by about 60% and was later adapted for the IT department's ticketing system. Technologies used included Python, Docker, Redis, Qdrant, NeMo, OpenAI API, FastAPI, and LangChain.

Synthetic data generation *Apr 2024 - Jun 2024*
Utilised 3D CAD models with the Pyrender framework to generate a dataset of defective industrial components. The CAD textures were modified using the InstructPix2Pix model to simulate cracks and rusting effects. The complete pipeline was deployed internally using Docker and FastAPI. This project, ideated and executed by

me, reduced overall project costs by 19% through lower item imports and manual data collection expenses, and resulted in a SaaS proposal from the customer, who agreed to a monthly subscription model.

Natural language to robotic actions *Apr 2023 - Apr 2024*

The OpenAI GPT-3.5-Turbo model was used to convert high-level human instructions into robotic action plans. Human inputs, robotic arm data, and available AI skills, such as detection models, were provided to generate behaviour trees containing the robotic actions. I was responsible for prompt engineering, building the RAG pipeline, and productionising the code along with the finalised prompts. The demo was delivered successfully within three weeks, and the product was well-received at iREX 2023. Development utilised OpenAI APIs, Redis, Weaviate, LangChain and FastAPI

6D pose estimation *Nov 2021 - Apr 2023*

Conducted systematic research on existing neural network models and fine-tuned the best-performing model for the customer's industrial bolts use case, addressing the challenge of reflective and textureless surfaces. To facilitate dataset generation, I developed an annotation tool using OpenCV and Python, which ensured smooth project progress. The tool was later semi-automated, reducing manual annotation time by 80%. The complete research process was thoroughly documented and delivered to the Japanese customer.

Technical Skills

- Programming: Python
- Databases: SQL, Vector Database
- API: FastAPI
- Tools: Git, Docker, VS Code, Cursor, Trivy
- Software Concepts: Data Structures, Agile, Model Deployment, PEP8 Standards
- AI Concepts: Deep Learning, Machine Learning, Generative AI, Computer Vision, Natural Language Processing(NLP)
- Framework: Tensorflow, PyTorch, OpenCV, Langchain, HuggingFace
- Cloud Platforms: Google Cloud Platform(GCP), VastAI

Education

MSc Data Science and AI (Year in Industry) *Sep 2025 – Expected Sept 2027*

University of Liverpool, Liverpool, UK

Relevant Modules: Research in CS, Math and Stats for AI, Big Data Analysis for social media, Relational Databases, Data Mining and Visualization, Computational Intelligence, Applied AI

Bachelor of Engineering *Aug 2017 – Aug 2021*

Visvesvaraya Technological University, India CGPA - 8.40

Electronics and Communication Engineering

Achievements

- **Customer Appreciation Award 2023** - Received from Tata Elxsi for delivering 'Natural Language to Robotic Actions' project in record time for the Japanese Client to showcase demo in iREX 2023.
- **Rising Star Award 2022** - Received from Tata Elxsi in recognition of my dedication and problem-solving ability during my first year.
- **IEEE National Level Best Project Award 2021** - Brain Tumor Segmentation model deployed on Jetson nano (4GB RAM). Under graduate final year project.

Publications

- COVID-19 Detection using Chest X-RAY *Mar 2022*

Soft Skills

1. Communication 2. Team Work 3. Critical Thinking 4. Adaptibility 5. Time Management
6. Research Documentation