

SHADHIL SIRAJUDHEEN C K

AI & ML ENGINEER

shadhilsirajudheenck@gmail.com | [+971 509170611](tel:+971509170611) | [Linkedin](#) | [GitHub](#) | [Dubai, UAE](#)

Summary

AI & ML Engineer with over 5 years of hands-on experience delivering scalable and production-ready solutions in computer vision, NLP, deep learning, and data science. Proven track record in developing advanced ML pipelines, deploying generative AI tools, and building automation platforms using PyTorch, TensorFlow, and OpenCV. Skilled in designing end-to-end applications with containerized deployments using Docker, FastAPI, and cloud platforms like AWS and Azure. Adept at translating business problems into AI-driven solutions, reducing manual efforts and improving performance by up to 60%. Strong collaborative experience across cross-functional teams, delivering high-impact products in both startup and enterprise environments.

Professional Skills

Programming Languages: Python | JavaScript | Bash | SQL/SEQUEL | HTML | CSS | React | C#

Frameworks & Libraries: PyTorch | TensorFlow | Keras | OpenCV | Hugging Face Transformers | Scikit-learn | FastAPI | Flask | Pandas | NumPy | Matplotlib | Seaborn

Computer Vision: Object Detection | Face Recognition | OCR | Image Segmentation | Stable Diffusion | GANs | EasyOCR | yFiles | Mermaid.js

Natural Language Processing: Transformers | Text Summarization | Text Classification | Language Detection | Named Entity Recognition | Gensim | Google Pegasus | Whisper

Machine Learning: Classification | Regression | Recommendation Systems | Clustering | KNN | Random Forest | GridSearchCV | Logistic Regression

Model Deployment: Docker | FastAPI | AWS EC2 | S3 | Lambda | CloudWatch | Azure OpenAI | Gradio | Hugging Face Spaces

Tools & Platforms: Jupyter Notebook | VS Code | Git | GitHub | Bitbucket | Tkinter | React.js | Vite | FFmpeg | RunwayML | Kling.ai | MidJourney

Data Handling & Analysis: ETL | Data Cleaning | Pandas | NumPy | SQL | PySpark | Databricks | CDC Processes | Data Validation | Excel/PowerPoint Automation

Soft Skills: Problem Solving | Communication | Agile Methodologies | Cross-functional Collaboration | Rapid Prototyping | Time Management | Client Interaction

Work History

Tek Infotree Global | IT Services –

July 2024 – June 2025

AI Software Engineer

Karnataka, India

- Worked as AI Software Engineer on client project with **Intel India Pvt Ltd**, delivering AI-driven automation, computer vision, and NLP solutions.
- Designed and deployed Python-based utilities for computer vision workflows, automating component verification, topology generation, and reporting—increased accuracy and reduced manual workload by 40%.
- Developed an end-to-end image processing pipeline using PyTorch, delivering automated PowerPoint and Excel reports, resulting in a 50% reduction in reporting time.
- Engineered a GUI-based tool integrated with Azure OpenAI for block diagram analysis and batch processing—streamlined JSON/text extraction by 60% and improved analysis speed.
- Implemented automation scripts for annotation, metadata parsing, and quality checks, leading to 30% faster dataset preparation.
- Collaborated with Intel teams to integrate AI/ML models into production using Azure ML services, ensuring scalable deployment and monitoring.
- Applied OCR and object detection techniques to improve visual data parsing, boosting component identification rates by 25%.

- Documented reusable frameworks, optimized performance, and reviewed peer code—ensuring scalable and maintainable AI solutions.

Winnopro Technologies Pvt Ltd (renamed IMCapsule Technologies Pvt Ltd) | IT – September 2022 – June 2024 AI & ML Engineer Kerala, India

- Led the implementation of Stable Diffusion models for automated image and background generation, achieving 30% faster turnaround for client-ready assets.
- Fine-tuned generative models based on client feedback, boosting adoption and customer satisfaction by 25%.
- Deployed AWS services (S3, CloudWatch, Lambda) for monitoring and debugging, ensuring reliable and scalable pipelines.
- Developed modular, reusable components for AI workflows, reducing development time by 40%.
- Collaborated with cross-functional teams (design/product) to align AI outputs with business goals, improving delivery speed and quality.
- Built lip-sync generation platform, subtitle automation (Whisper + FFmpeg), and short video generation workflows using RunwayML, Kling.ai, and MidJourney.
- Contributed to recommender systems, text-to-image, and OCR-based projects, ensuring high-performance deployments.

IMMCO Software Solutions Pvt Ltd | IT – Data Scientist

June 2020 – August 2022
Kerala, India

- Delivered ML, NLP, and CV solutions with TensorFlow and PyTorch, including object detection and image-based automation.
- Developed a face recognition-based attendance system with OpenCV and deep learning, reducing manual errors.
- Analyzed and processed large datasets for model training and evaluation, ensuring high accuracy and validation.
- Leveraged AWS SageMaker for experimentation and deployment, improving reproducibility and reducing cycle times.
- Optimized deep learning models for scalability and faster inference in live environments.

Project Experience

Intel India

- *Block Diagram Generator*: Built a React + Vite UI using yFiles and Mermaid. Used Azure OpenAI with RAG (FAISS) to retrieve Mermaid code. Integrated with OpenWebUI for interactive diagram generation, editing, and saving.
- *Image Processing and Topology Creation*: Developed a Tkinter GUI using OpenCV to extract topology data from diagrams. Enabled batch image processing, Excel generation, and automated verification.
- *Knowledge Base Validation & Reporting*: Automated component verification, Excel and PowerPoint report generation. Used modular Python scripts to streamline repetitive documentation.

IM Capsule Technologies Pvt Ltd

- *Video Subtitle Generation (DL)*: Created bilingual subtitles (Korean & English) using Whisper. Integrated with FFmpeg for accurate syncing.
- *Text to Image Generation (GAN)*: Developed a text-to-image system using Stable Diffusion, deployed via Docker API with Git version control.
- *AI Human – Lip Sync Generator*: Built a lip-sync video platform with avatar/background selection, Google TTS, and wav-to-lip GAN. Hosted on EC2 with Docker & CloudWatch.
- *AI Short Video Generation*: Delivered 1-minute videos using RunwayML, Kling.ai, and MidJourney—fast, cost-effective content creation.

WINNOPRO Technologies Pvt Ltd

- *Video Recommendation System*: Developed a personalized recommender using KNN. Used TensorFlow/PyTorch for object detection, YAMNet for audio analysis, and NLP for keyword extraction.

IMMCO Software Solutions Pvt Ltd

- *Node Split Analysis (ML)*: Designed a predictive tool using 12 input features. Selected a tuned Random Forest model via GridSearchCV.
- *Field Validation Tool (DL)*: Trained a Faster R-CNN model to detect pits and classify materials. Automated logging to Excel.
- *Street Name Extraction (CV)*: Built a classifier using EasyOCR, OpenCV, and PyTorch to extract street names from map images.
- *Company Assistant (NLP)*: Built an AI assistant for summarizing documents using Transformers and Gensim. Created a Tkinter GUI for user interaction.
- *Face Recognition Attendance System*: Developed a real-time attendance system using OpenCV face recognition, logging, and reporting.

Education

B.tech in Electrical and Electronics Engineering
Cochin University of Science and Technology

July 2015 - June 2019
Kerala, India

Certificates

Data Science Expert with Python
Techolas Institute of Technology Pvt Ltd

November 2019 - April 2020
Kerala, India

Language

English: Read, Write, Speak

Hindi: Read, Write, Speak

Arabic: Speak
