

Rajveer Jadav

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PROFESSIONAL SUMMARY

- AI/ML Engineer specializing in generative AI, LLMs, RAG systems, scalable ML solutions, and MLOps practices. Experienced in research-driven model development, production deployment with MLflow, DVC, and Weights & Biases, and full-stack AI applications, focusing on accuracy, efficiency, and user-centric outcomes.

EDUCATION

University of Waterloo

Master of Engineering in Electrical & Computer Engineering

Sri Sivasubramaniya Nadar College of Engineering

BTech Information Technology

Waterloo, ON

Aug 2024 – Aug 2025

Chennai, India

Jul 2019 – May 2023

EXPERIENCE

ML Graduate Researcher

May 2025 – Oct 2025

University of Waterloo

Waterloo, ON

- Led development of Bimodal Multi-Scale Attention Autoencoder (Bi-MSAAE) for facial image/video denoising under the supervision of Prof. Sagar Naik; integrated multi-scale encoder, noise gate, channel attention, and dual-head decoder for RGB/grayscale modalities.
- Achieved PSNR gains of 6.25 dB (to 31.18 dB) on CELEBA-HQ and 3.85 dB (to 28.57 dB) on FER2013; improved SSIM up to 0.92, outperforming FFDNet and FastDVDnet baselines.
- First-authored paper “Bimodal Multi-Scale Attention Autoencoder (Bi-MSAAE) for Facial Image and Video Denoising” submitted to IEEE Access.

Full Stack Developer

May 2023 – Jul 2024

Lead-On-Leads PVT LTD

Kathmandu, Nepal

- Developed and maintained web applications using React.js and Node.js with RESTful APIs.
- Built a prototype AI chatbot to explore LLM integration for internal tools.
- Assisted in testing workflows and supported deployment processes.
- Gained hands-on experience with Docker and AWS services for development and deployment.

PROJECTS

AI-Powered Study Assistant | LangChain, LLM, RAG, ChromaDB, Firebase, Streamlit, Python

- Built production-ready AI study assistant using LangChain, LLMs, and RAG with ChromaDB/Firebase for secure retrieval; supports syllabus summarization, Q&A, and quiz generation.

Agentic RAG Customer Support Chatbot | Claude, MCP, FAISS, FastAPI, Docker

- Developed scalable chatbot with agentic AI, LLMs, and RAG via MCP for tool integration; enables multi-step reasoning, cited responses, and memory for support tickets.

MLOps Projects | DVC, AWS, GitHub, MLflow, W&B, TensorFlow, Scikit-learn

- Automated ML pipelines for ingestion, training, evaluation, and storage using DVC/AWS S3; tracked experiments with MLflow, W&B, including hyperparameter tuning and CI/CD.

Financial AI Agent | Phidata, Mistral, Open-Source LLM, LangChain

- Developed financial AI agent prototype using Phidata and Mistral for intelligent query handling and insights generation.

Generative AI Web Suite | Python-Streamlit, Mistral API, GitHub, Railway

- Deployed AI apps (Cover Letter Generator, Code Debugger, Story Generator, Chatbot) with Mistral APIs, interactive frontends, and CI/CD via GitHub/Railway.

Service Provider Web-app | React, Firebase, AWS, Selenium, Jest, Railway

- Built “Fixify” for home maintenance booking with authentication, real-time features, service discovery, and reviews; added Selenium/Jest testing.

PUBLICATIONS

Bimodal Multi-Scale Attention Autoencoder (Bi-MSAAE) for Facial Image and Video Denoising, Rajveer Jadav, Marzia Zaman, Darshana Upadhyay, Kshirasagar Naik. IEEE Access, under review, 28th Oct. 2025.

TECHNICAL SKILLS

AI/ML/GenAI: Python, TensorFlow, Keras, CNN, OpenCV, Generative AI, Mistral/Gemini APIs, Large Language Models (LLMs), RAG, LangChain, LangGraph, MCP, Agentic AI, MLflow, DVC, Weights & Biases, Docker, AWS SageMaker/S3

Web Development: React, HTML, CSS, JavaScript, Bootstrap, Streamlit, Node.js, Express, REST APIs, SEO, Selenium, Jest

Databases: SQL, MongoDB, Firebase

Data Analysis & Visualization: Power BI, Tableau, MATLAB

Programming & Algorithms: C#, C++, C, Graph Theory, Multi-threading, CMake, Linux

IT/Tools/Platforms: Jira, Bomgar, TeamViewer, GitHub, Colab, VS Code, Jupyter, Railway, MS 365, Zoom

LANGUAGES

English, Hindi, Gujarati: Professional Proficiency