Mohd Aamir

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EDUCATION

EURECOM   Sophia Antipolis, France
Master of Science in Data Science   *Sep. 2021 – Sep 2023*

SRM University   Chennai, India
Bachelor of Technology in Electronics and Communication   *Sep. 2016 – Sep 2020*

EXPERIENCE

Research Engineer   Feb 2024 – Present
EURECOM — Huawei Project Netception — EU Project Adroit6G   *Sophia Antipolis, France*

- Engineered a state-of-the-art **anomaly detection** pipeline for multivariate time series by adapting COIN++, an **Implicit Neural Network** enabling direct modeling of missing values and improving anomaly detection **F1-score** by 12% over Huawei's baseline models.
- Benchmarked **12+ architectures** (e.g. LSTM/TCN/Transformer) on synthetic and confidential Huawei datasets; implemented **algorithms** to inject controlled missing timestamps for testing.
- Integrated 3 pre-trained **diffusion models** into **MLflow**, enabling real-time inference of missing 3D holographic views during teaching sessions for the **EU Adroit6G project**.
- Validated outputs through various **KPIs** such as SSIM/PSNR, sustaining over **95%** SSIM on generated views.
- Contributed to shared research codebase used by **20+ researchers** across EU, implementing modular components, testing, and documentation

Research Intern – Computer Vision   Mar. 2023 – Sep 2023
HUAWEI   *Mougins, France*

- Engineered **data generation** pipeline producing 50,000 synthetic training samples by reverse-engineering Huawei's ISP, enabling supervised training for SOTA denoising models
- Implemented a **CNN**-based raw image denoising model in **PyTorch**, pruned CNN to cut inference time by **21%** with PSNR drop less than 3 dB.
- Optimized distributed training pipelines on Huawei's **GPU clusters**, debugging **OOM** errors, reducing training time by 15%

PROJECTS

Enterprise AI: LangChain Tool-Calling & RAG Agent | July. 2025 – Sep. 2025

- Built an end-to-end enterprise assistant using **LangChain, tool calling, and RAG** over company knowledge to draft emails, schedule meetings via Gmail, and answer internal queries.
- Implemented production **RAG pipeline** with retrieval optimization, built autonomous **AI agents** with function calling, tool orchestration, and reasoning chains.
- Developed backend with **FastAPI**, containerized using **Docker**, deployed on **Kubernetes** and **AWS**, and managed via **CI/CD** for scalability.

Detecting Prevent/Enable event relationship types in text | Oct. 2022 – Feb. 2023

- Created 1.4M-sentence dataset from 140 k news articles using a Python-based extraction and preprocessing.
- Applied **S-BERT** embeddings with ensemble **classifiers**, achieving 87% accuracy outperforming single-model baselines by 6%.

Detecting Context Misinformation in Text and Images | Mar. 2022 – June 2022

- Developed **multi-modal model** combining text (S-BERT) and vision (ResNet-50) features.
- Trained **MLP** and **SVM** classifiers in **TensorFlow**, improving accuracy by 9% over previous baselines.

Snake Species Identification Using Images | Oct. 2021 – Feb. 2022

- Developed **CNNs** alongside SVM, MLP, and **KNN** classifiers for venomous snake identification.
- Achieved high-accuracy classification enabling potential field deployment for wildlife safety applications.

TECHNICAL SKILLS

Programming Languages: Python, C++, SQL, MATLAB, JavaScript, HTML5, CSS
Data Science & Machine Learning: PyTorch, TensorFlow, Keras, scikit-learn, CUDA, LLMs, NLP, Diffusion Models, Pandas, NumPy, SciPy, Matplotlib, Seaborn, OpenCV, OpenAI API, HuggingFace Hub API
Tools & Frameworks: LangChain, MLFlow, Docker, Git, Linux, AWS, Kubernetes, VS Code, Visual Studio, Gitlab, SQL, Pinecone, React, TailwindCSS, FastAPI, REST APIs