K Mohammed Hamza

EDUCATION

SRM Institute of Science and Technology Chennai, India

B.Tech in Electronics and Communication Engineering — GPA: 8.3/10 2022 – 2026

- Coursework: Machine Learning, Neural Networks, Pattern Recognition, Computer Architecture (NPTEL), Semiconductor Process Integration

National Tsing Hua University (NTHU) Taiwan

Semester Abroad Program *Present*

EXPERIENCE

Prodigy InfoTech Remote

Data Science Intern *Feb 2023 – Mar 2023*

- Performed exploratory data analysis and predictive modeling on structured datasets.
- Documented ML workflows in Jupyter for reproducibility and audit readiness.

Razan & Co. / Freshyies Remote

Analytics Contributor *Jun 2024 – Aug 2024*

- Built Power BI dashboards to track KPIs and customer engagement.
- Analyzed market data to support product positioning and client decision-making.

PROJECTS

Fine-tuning Ollama 3B Model LLMs & NLP

Independent 2025

- Fine-tuned a 3B parameter LLM on domain-specific datasets to enhance reasoning and text generation.
- Evaluated improvements using perplexity, accuracy, and task-specific benchmarks.

Optimized Matrix Multiplication for Object Tracking Computer Vision

Academic 2024

- Implemented optimized matrix multiplication to accelerate object tracking in video streams.
- Improved performance of OpenCV tracking pipeline through cache-efficient computation.

RRAM Simulation using HfO_2 Semiconductor Research

Research Project 2025

- Modeled resistive switching in HfO_2-based memory using SEMulator3D and MATLAB.
- Analyzed I-V characteristics and retention for device reliability studies.

SimCLR Self-Supervised Learning TensorFlow

Academic 2024

- Built contrastive learning pipeline to extract robust image representations from unlabeled data.

TECHNICAL SKILLS

Languages: Python, C, C++, SQL

AI/ML: TensorFlow, PyTorch, NLP, LLMs, Self-Supervised Learning

Tools: Power BI, Pandas, Git, Jupyter, MATLAB, SEMulator3D

Domains: Machine Learning, Data Engineering, Computer Vision, Embedded Systems, Semiconductor Modeling

Platforms: Linux (Ubuntu), Windows

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