

MUHAMMAD AHSAN

Computer Science Undergraduate — AI/ML & Deep Learning

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PROFESSIONAL SUMMARY

Computer Science undergraduate at FAST-NUCES (Semester 6, CGPA 3.35/4.0) transitioning into Artificial Intelligence and Deep Learning, with current industry experience as a Data Engineering Intern. Hands-on experience building CNN, RNN, and Vision Transformer models in Keras and PyTorch, and building/maintaining data pipelines in a production tech environment. Completing the IBM AI Engineering Professional Certificate (8 of 13 courses done).

TECHNICAL SKILLS

Languages: Python, C, C++, JavaScript

AI / ML / DL: Keras, TensorFlow, PyTorch, CNN, RNN, Vision Transformers, Transfer Learning, Autoencoders, NumPy, Pandas, Matplotlib, Scikit-Learn

Tools & Other: Git, GitHub, VS Code, Jupyter Notebook, SQL, HTML/CSS, Node.js

EXPERIENCE

Data Engineering Intern — M1 Private Aviation Technology | August 2026 – November 2026

- Assist in designing, building, and maintaining scalable data pipelines to collect, process, and store operational data used across analytics and reporting at M1, a blockchain-powered marketplace for luxury assets, private jets, and yachts.
- Support the organization, optimization, and maintenance of databases while ensuring data accuracy and integrity.
- Integrate data from multiple sources and perform data cleaning, transformation, and validation to prepare datasets for analysis.
- Document data workflows and technical processes, collaborating with engineering and analytics teams on data-driven projects.

PROJECTS

Satellite Land Classification: CNN–Vision Transformer Integration | Keras · PyTorch · CNN · Vision Transformers · Transfer Learning

- Built a hybrid CNN + Vision Transformer pipeline to classify satellite terrain (crops, forests, water bodies) for agricultural land-use analysis, as the capstone of the IBM AI Engineering Professional Certificate.
- Implemented parallel data pipelines in Keras and PyTorch, fine-tuned pretrained ViT models via transfer learning, and benchmarked models using accuracy, precision, recall, F1-score, and AU-ROC. Code: github.com/muhammadahsan3/land-classification-cnn-vit

Aircraft Damage Classification & Captioning | Python · CNN · RNN · Transformers · NumPy · Pandas

- Built a deep learning pipeline to classify aircraft damage severity from images and auto-generate descriptive captions, combining CNN-based feature extraction with RNN/Transformer sequence modeling.

Waste Classification Using Transfer Learning | Python · TensorFlow/Keras · CNN · Transfer Learning

- Developed an image classifier for waste materials using transfer learning on pretrained CNN architectures, applying data augmentation and fine-tuning to improve accuracy on a real-world dataset.

EDUCATION

BS Computer Science — FAST-NUCES, Karachi (Batch 23K, Semester 6 completed, 2023 – Present)

CGPA: 3.35 / 4.0

Dean's List, Fall 2024 (SGPA 3.82)

Intermediate (Pre-Engineering) — Jinnah Government College Nazimabad

77.8%

Matriculation — PEG School

81%

CERTIFICATIONS & COURSES

- IBM AI Engineering Professional Certificate — Coursera** (8 of 13 courses completed, in progress): Machine Learning with Python, Introduction to Deep Learning & Neural Networks with Keras, Deep Learning with Keras and TensorFlow, Introduction to Neural Networks and PyTorch, Deep Learning with PyTorch, AI Capstone Project with Deep Learning, Generative AI and LLMs: Architecture and Data Preparation, Gen AI Foundational Models for NLP & Language Understanding
- 100 Days of Machine Learning — CampusX
- Full Stack Web Development — Angela Yu, Udemy
- Foundations of UX Design — Google, Coursera