

ADEEL ASGHAR

Artificial Intelligence Undergraduate | ML, Deep Learning & Systems

Pakistan — Open to Remote | adeelyt157@gmail.com | +92 322 9672161 | linkedin.com/in/adeelasghar11 | github.com/AdeelAsghar11

AI undergraduate (3rd Year, CGPA 3.83/4.00) at COMSATS University Islamabad, Wah Campus with a strong foundation in Machine Learning, Deep Learning, and Data Science — built through real-world projects, freelance work, and end-to-end ML pipelines. Tech Lead and Founding Member of GDG On Campus, organizing workshops and mentoring students in AI/DS. Certified by DeepLearning.AI, Harvard, and IBM. Seeking AI/ML internship or remote roles to deliver impactful, data-driven solutions.

EXPERIENCE

Tech Lead & Founding Member | [GDG On Campus — COMSATS Wah](#) Oct 2024 – Present

- Co-founded the Google Developer Groups chapter at COMSATS University Wah Campus — one of the first student-led tech communities at the university
- Leads AI/Data Science initiatives and coordinates student project teams across multiple domains
- Organize and facilitate technical workshops, seminars, and hands-on sessions for 100+ students
- Drive cross-team collaboration and mentor junior members in AI/ML fundamentals

DevOps & AI Intern | [SPS — Software Productivity Strategists](#) Jul 2025 – Sep 2025

- Built and deployed CI/CD pipelines using Jenkins covering build triggers, notifications, and automated testing
- Worked with Docker and Docker Swarm for containerization and service orchestration
- Used Git, Bitbucket, and branching strategies for version control and team collaboration

EDUCATION

Bachelor of Science in Artificial Intelligence (BSAI) Expected Sep 2027

COMSATS University Islamabad, Wah Campus · CGPA: 3.83/4.00

Relevant Coursework: Artificial Neural Networks & Deep Learning, Machine Learning Fundamentals, Artificial Intelligence, Data Structures, Database Systems, Information Security, Knowledge Representation & Reasoning, Design & Analysis of Algorithms, Linear Algebra

PROJECTS

[BSL Hand Gesture Recognition System](#) — *MobileNetV2, TensorFlow, Streamlit*

- Classified 34 British Sign Language gestures (0–10 digits + alphabet) with 95.74% accuracy and 95.78% F1-score
- Trained on 34,000 images (1,000/class) using MobileNetV2 with transfer learning and fine-tuning
- Deployed as an interactive real-time Streamlit web application

[Smart Recycle System — Industrial Waste Classifier](#) — *MobileNetV2, TensorFlow, Streamlit*

- Achieved 86%+ classification accuracy across 12 material categories using MobileNetV2 transfer learning
- Outperformed custom CNN baseline by 25% through model optimization and fine-tuning
- Deployed real-time hazardous waste detection system with an efficient inference pipeline for industrial constraints

[Smart Farm Security System](#) — *Custom CNN, TensorFlow, Keras, Streamlit*

- Built a CNN-based security system to classify 10 farm animal species and flag potential intruder threats using live image analysis
- Trained a custom CNN architecture from scratch on Animals-10 (28,000 images — dog, cat, horse, cow, sheep, chicken, elephant, spider, butterfly, squirrel), achieving 65% accuracy without transfer learning
- Deployed via Streamlit for real-time image analysis; accuracy intentionally baseline as the goal was implementing CNN architecture end-to-end from scratch

[Retail Sales Performance Analytics Dashboard](#) — *Python, Pandas, EDA, ETL, Tableau*

- Built end-to-end ETL pipeline processing 500,000+ transaction records for a UK-based online retailer
- Identified seasonal revenue spikes, top-performing product categories, and high-value customer segments through in-depth EDA

- Designed interactive Tableau dashboards enabling business intelligence decisions

Indian Air Pollution Analysis & Prediction — Python, Scikit-learn, Pandas, Random Forest, Streamlit

- Analyzed historical air quality data (2015–2020) across 26 major Indian cities to identify pollution patterns
- Built automated data pipeline merging disparate datasets with robust preprocessing (RobustScaler) to handle extreme outliers
- Compared 4 regression models with hyperparameter tuning to forecast PM2.5 levels
- Deployed interactive Streamlit dashboard for real-time pollution prediction based on user inputs

AI/ML Model Advisor — Expert System — Python, SymPy, Flask, Forward/Backward Chaining

- Built a rule-based expert system using custom forward and backward chaining inference engines
- Recommends optimal ML algorithms based on dataset characteristics with explainability support
- Deployed with a lightweight Flask web interface for interactive user input

Additional Projects: Smart Building Energy Efficiency Prediction · Encrypted Screenshot Monitoring App (AES/DES + SHA-256) · TravelBridge Pakistan Platform (Laravel/PHP — Peer-to-Peer Traveller Delivery)

CERTIFICATIONS

[Machine Learning Specialization \(incl. Supervised ML & Advanced Learning Algorithms\)](#) · DeepLearning.AI — Andrew Ng Sep 2025

[Data Analysis with Python](#) · IBM Sep 2025

[Python for Data Analysis: Pandas & NumPy](#) · Coursera Jul 2025

[Git with GitLab & Bitbucket](#) · LearnKartS Jul 2025

[Introduction to Programming with Python \(CS50P\)](#) · Harvard University Aug 2024

TECHNICAL SKILLS

Languages: Python, C++, Java, SQL, PHP

AI / ML: Supervised & Unsupervised Learning, Regression, Classification, Clustering, Model Evaluation, Transfer Learning, Fine-tuning

Deep Learning: Neural Networks, CNN, Backpropagation, MobileNetV2, TensorFlow, Keras

Data Science: NumPy, Pandas, Matplotlib, Scikit-learn, EDA, Feature Engineering, ETL Pipelines, Tableau

MLOps / DevOps: Git, GitHub, Bitbucket, Jenkins, Docker, Docker Swarm, CI/CD Pipelines

Deployment: Streamlit, Flask, Jupyter Notebook, VS Code, Oracle DB

ACHIEVEMENTS & ACTIVITIES

- Academic Excellence Award — COMSATS University Wah Campus
- #1 — CS Quiz Competition, UET Taxila
- #1 — Speed Programming Competition, HITEC University
- Active Participant — MIT Hackathon and other national-level competitions
- Ranked #4 out of 80+ participants — Tech Quiz Competition, Tech Fest COMSATS Islamabad

LANGUAGES

English (Professional) · **Urdu** (Native) · **Pashto** (Conversational)