Assad Khurshid

Data Scientist | Machine Learning Engineer | Computer Vision Engineer | NLP

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PROFESSIONAL SUMMARY

AI/ML Engineer with 2+ years of professional experience designing and deploying machine learning systems across Data Science, NLP, and Computer Vision. Hands-on expertise in Deep Learning Pipelines, MLOps, and production containerisation — from model benchmarking to scalable REST API deployment. Currently pursuing M.Sc. Artificial Intelligence at BTU Cottbus-Senftenberg, Germany. Experienced in communicating technical findings to both engineering teams and non-technical stakeholders.

FLAGSHIP PROJECT

Real-Time Object Detection System — Industrial Computer Vision (YOLOv8)   *Oct 2024*

- ▸ **Problem:** Manual visual inspection in industrial settings is slow, inconsistent, and unscalable — requiring an automated, real-time detection pipeline that could be deployed on standard hardware.
- ▸ **Approach: Benchmarked YOLOv8 variants** (n / s / m) across accuracy, mAP@0.5, and inference latency on a custom-annotated dataset; selected the optimal model via systematic evaluation. Built an OpenCV-integrated video stream inference engine and packaged the full **Deep Learning Pipeline** in Docker for portable deployment.
- ▸ **Result:** Achieved **sub-50ms inference latency** with reliable multi-condition detection; containerised architecture ready for production scaling with monitoring hooks.

Tech: Python · PyTorch · YOLOv8 · Ultralytics · OpenCV · Docker   View on GitHub ↗

PROFESSIONAL EXPERIENCE

Agentic AI Engineer (Internship) · Think3DDD — Germany   *Oct 2025 – Jan 2026*

- – Designed and deployed production-ready agentic AI systems with multi-agent workflows and LLM orchestration; **benchmarked model configurations** to select optimal performance for client pipelines.
- – Containerised ML backend services (Docker, FastAPI, Kubernetes) within a full **MLOps** workflow, **reducing deployment cycles by 50%**; enforced **clean code standards** and participated in code reviews.
- – Built **CI/CD pipelines** and REST API integrations enabling reliable model serving across development and production environments.

Machine Learning Engineer · Tekvaly — Pakistan   *Apr 2023 – Feb 2024*

- – Developed, **benchmarked**, and fine-tuned ML models (XGBoost, LSTM, ARIMA) for regression, classification, and time-series forecasting; achieved **85% accuracy** with **20% precision improvement**.
- – Built end-to-end **Deep Learning Pipelines** covering feature engineering, model training, evaluation, and cloud deployment (TensorFlow, Scikit-learn, AWS); **cut deployment time by 40%**.
- – **Visualised and documented** model performance experiments; presented findings to cross-functional teams to support data-driven decision making.

EDUCATION

M.Sc. Artificial Intelligence · BTU Cottbus-Senftenberg, Germany   *Oct 2024 – Dec 2027 (exp.)*

- – Coursework: Machine Learning · Deep Learning · Computer Vision · Generative AI · NLP · Causal Data Science · Mathematical Methods for AI

B.Sc. Computer Science — GPA 3.79 / 4.0 · University of Haripur, Pakistan *Sep 2020 – Jun 2024*

– Thesis: Real-Time Helmet Detection & License Plate Violation System — end-to-end **YOLOv8 Deep Learning Pipeline** with live video stream inference.
– Coursework: Big Data · DBMS · Cloud Computing · Probability & Statistics · Computer Networks

FURTHER PROJECTS

NLP App — Bureaucracy Buddy (AI Document Assistant) *Aug 2024*

– Built NLP pipeline for German document processing: plain-language summarisation, deadline extraction, and EN↔DE translation using **LangChain + HuggingFace**; deployed via Streamlit + FastAPI. GitHub ↗
Tech: Python · LangChain · HuggingFace · Streamlit · OpenAI API · FastAPI

Time Series Forecasting — Industrial Energy Consumption *May 2025*

– Compared ARIMA, XGBoost, and LSTM across MAE, RMSE, and inference time; achieved **85% accuracy** with **visualised comparative results** dashboard for stakeholder review. GitHub ↗
Tech: Python · TensorFlow · Scikit-learn · Pandas · Matplotlib

BI Dashboard — Customer Trend Analysis *Oct 2025*

– SQL + Python ETL pipeline feeding an interactive **Power BI dashboard** for KPI monitoring and business reporting. GitHub ↗
Tech: Python · SQL · Power BI · Pandas · NumPy

TECHNICAL SKILLS

ML & Data Science: Scikit-learn · XGBoost · LightGBM · ARIMA · Prophet · Regression · Classification · Clustering · Feature Engineering · A/B Testing · MLOps · MLflow · Model Monitoring
Deep Learning: PyTorch · TensorFlow · Keras · CNNs · RNNs · LSTMs · Transformers · Transfer Learning · Fine-tuning · Deep Learning Pipelines
NLP: LangChain · HuggingFace · spaCy · NLTK · Text Classification · NER · Summarisation · Embeddings · RAG · OpenAI API · Prompt Engineering
Computer Vision: YOLOv8 · OpenCV · Ultralytics · Object Detection · Image Segmentation · Real-time Inference · Computer Vision Engineer
Data & Visualisation: Python · SQL · Pandas · NumPy · Matplotlib · Seaborn · Plotly · Power BI · Tableau · EDA · ETL
Engineering & DevOps: Docker · Kubernetes · FastAPI · REST APIs · AWS · Git · CI/CD · Clean Code · OOP · Streamlit · Jupyter

LANGUAGES

German B1 — Conversational · **English** C1 — Fluent · **Urdu** C2 — Native

CERTIFICATIONS

– Machine Learning A-Z: AI, Python, R + ChatGPT **Prize** (2025) — Udemy
– Improving Deep Neural Networks: Hyperparameter Tuning, Regularisation & Optimisation — Coursera (DeepLearning.AI)
– Regression Analysis: Simplify Complex Data — Coursera
– The Power of Statistics — Coursera
– Translating Data into Insights — Coursera