SHAISTA SHABBIR

Hamburg, Germany | shaista.s.shabbir@gmail.com | English (Fluent), German (B1-B2)
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PROFILE

Research-focused AI/ML Engineer with 5+ years of progressive experience in NLP, deep learning, LLMs, and federated learning. Strong academic and industrial background, with project delivery across predictive modeling, privacy-preserving ML, and AI-based systems. Proficient in Python, PyTorch, TensorFlow, and cloud-native MLOps workflows. Bilingual (English/German).

TECHNICAL SKILLS

Languages & ML: Python, PyTorch, TensorFlow, Scikit-learn, Keras, NumPy, pandas, Hugging Face Transformers, LangChain, PyG, ONNX
NLP & AI: BERT, RoBERTa, LSTM, GRU, Spacy, Gensim, NLTK, Transformers, Event Extraction, LLM Fine-tuning
MLOps & Deployment: MLflow, DVC, Docker, FastAPI, Flask, Streamlit, GitHub Actions, GitLab CI/CD, Kubernetes (intro)
Data & Infrastructure: SQL, PostgreSQL, MongoDB, AWS (EC2, S3, DynamoDB), REST APIs, NoSQL, Apache Kafka (basic)
Testing & QA: Unit Testing, PyTest, Integration Testing, Test Coverage, CI validation pipelines
Project Management: Git, JIRA, Trello, Confluence, Agile, Scrum

EXPERIENCE

Research Assistant – AI/ML & NLP
HITeC, Hamburg, Germany • Nov 2022 – Dec 2024
Projects: CoyPu, PEM, DigitalCurri, ewiVikis

- Built predictive ML models (LSTM, GRU, MLP) for phase length and energy consumption forecasting in manufacturing (PEM, DigitalCurri).
- Led development of event extraction pipeline using LLMs (BERT, RoBERTa, LSTM) with visualization dashboards (CoyPu).
- Developed federated learning-based health monitoring system using sensor data from Raspberry Pi and Ouraring (ewiVikis).
- Deployed APIs and dashboards with FastAPI and Streamlit; integrated SQLAlchemy and REST APIs.
- Maintained CI/CD workflows via GitHub Actions and GitLab CI; used MLflow/DVC for tracking experiments.

Lecturer & ML Mentor
University of Kotli AJK, Pakistan • May 2019 – till now

- Taught AI, Machine Learning, Data Structures, and Software Engineering.
- Supervised ML student projects including predictive analytics and classification pipelines.
- Co-led curriculum design and rollout of AI/DS programs.

Research Assistant – Data Science
COMSENS Lab, COMSATS Islamabad • Jul 2019 – Sep 2019

- Performed exploratory data analysis and built statistical models using Python.
- Created interactive visualizations with Tableau and Plotly.
- Reported findings via LaTeX documentation.

Software Engineer
University of Management Sciences and IT, Kotli • Sep 2015 – Oct 2016

- Built licensing software using C#, PHP, and MySQL.
- Migrated desktop app to responsive web interface.
- Ensured system security and documentation.

EDUCATION

MS Computer Science
Virtual University Pakistan • Oct 2017 – Oct 2019

- Specialization: Software Engineering
- Thesis: Short-Term Electricity Load & Price Forecasting using CNN
- Final Grade: 75% • EQF Level 7

BS Computer Science
University of Azad Jammu & Kashmir • Dec 2016

- Final Grade: 89.89% (Gold Medalist) • EQF Level 6

PROJECT HIGHLIGHTS

- **LLM-Based Event Extraction (CoyPu):** BERT/RoBERTa + Streamlit Dashboard + REST APIs
- **ML Forecasting in Manufacturing (PEM, DigitalCurri):** GRU/LSTM models + CI/CD integration
- **Federated Learning for Health (ewiVikis):** AWS DynamoDB + privacy-preserving pipeline
- **CNN for Smart Grid Forecasting (Thesis):** Energy load & price prediction with TensorFlow

CERTIFICATIONS & LANGUAGES

- **Certifications:** Deep Learning Specialization (Coursera), MLOps Fundamentals, LangChain Bootcamp,National and International Conferences, Badminton Championship
- **Languages:** English (C2), German (B1-B2 in progress)

AVAILABILITY & LEGAL

- Available Immediately • Work Authorization: No Sponsorship Required • Residing in Hamburg, Germany