Muhammad Imran

Passport: PQ1225921 | **Work permit:** German | **Date of birth:** 03/02/1990 | **Place of birth:** Lahore, Pakistan | **Nationality:** Pakistani | **Gender:** Male | **Phone number:** (+49) 17647913382 (Mobile) | **Email address:** imrandogarpsf86@gmail.com |

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ABOUT ME

Master's candidate in Mathematical Data Science at Georg-August University of Göttingen with over 10 years of teaching experience in mathematics and computer science. Expert in **machine learning**, **deep learning (CV & NLP)**, **data management**, **cloud computing**, **optimization**, and **quantum computing**, with a proven track record of delivering impactful projects (e.g., 99-frame motion tracking, 90% improved NLP accuracy). Recognized with **8 teaching awards**, I combine technical prowess with pedagogical innovation to excel in data science, research, and educational technology roles.

WORK EXPERIENCE

09/09/2014 – 01/10/2023 Govt. High School, Khanqah Dogran, District Sheikhupura, Punjab, Pakistan

MATHEMATICS AND COMPUTER SCIENCE EDUCATOR SCHOOL EDUCATION DEPARTMENT, PUNJAB, PAKISTAN

- Designed and delivered curricula in **mathematics** (algebra, trigonometry, geometry, probability) and **computer science** (programming in **C++**, **Python**, algorithms, data structures) for grades 9–10, increasing student engagement by **20%** through innovative methods.
- Supervised computer science labs, leading **10+ practicals** (e.g., sorting algorithms, SQL databases, MATLAB operations), enhancing technical proficiency for **200+ students annually**.
- Integrated **data science**:
  - Analyzed student performance data with **Pandas** and **Excel**, improving administrative efficiency by **15%**.
  - Created **Plotly** visualizations (e.g., enrollment trends), adopted for school reports.
  - Developed predictive models for resource allocation, optimizing classroom allocation.
- Led digital enrollment campaigns using **Instagram** and **YouTube**, boosting enrollment by **10%** over 5 years.
- Chaired Discipline and Admission Committees (2018–2023), streamlining operations with data-driven decisions.

EDUCATION AND TRAINING

08/10/2023 – CURRENT Gottingen, Germany

MASTER'S IN MATHEMATICAL DATA SCIENCE George August University of Gottingen

Main Subjects: **Machine Learning**, **Deep Learning (CV & NLP)**, **Computer Vision,Optimization**, **Matrix Methods**, **Statistical Foundations, Image and Geometry Processing, Scientific Computing.**
Additional Courses:

- **Data Management for Data Science**: Mastered advanced data handling, preprocessing, and storage techniques for large-scale analytics.
- **Cloud and Service Computing**: Gained expertise in cloud infrastructure, distributed systems, and service-oriented computing for scalable solutions.
- **Key Achievements**:
- Delivered seminar on *Topological Data Analysis* (2024), applying persistent homology to datasets.
- Completed *NHR Workshop on Quantum Computing* (2025), mastering **quantum machine learning** with **Qiskit** and **PennyLane**.
- Developed 10 advanced projects and 30 different small projects (Exercises) (e.g., DETR, Kalman Filter, BERT), detailed below.

Website uni-goettingen.de | **Level in EQF** EQF level 7

2008 – 2012 Lahore, Pakistan

BS (HONS) MATHEMATICS & BACHELOR OF EDUCATION University of Education,Lahore

Main Subjects: **Linear Algebra**, **Probability & Statistics**,**Mathematical Statistics, Functional and Higher Analysis, Topology, Group Theory, Mechanics, Computer Applications and Education,** Trigonometry, Geometry, Pedagogical Methods and 6 months professional training.
Achievements: Awarded **Chief Minister's Youth Initiative Award (2012)** for academic excellence.

Website http://web.ue.edu.pk | **Level in EQF** EQF level 6

LANGUAGE SKILLS

Mother tongue(s): **URDU** | **ENGLISH** | **GERMAN**

SKILLS

DIGITAL SKILLS

Digital Skills

- **Programming**: **Python** (expert), R, MATLAB, SQL, C++
- **Machine Learning**: **Scikit-learn**, **TensorFlow**, **PyTorch**, XGBoost
- **Deep Learning**: **CNNs**, **RNNs**, **Transformers** (DETR, YOLO, BERT)
- **Computer Vision**: Motion Tracking (Kalman Filter), Object Detection, Image Processing
- **Data Management**: **Pandas** (expert), NumPy, SPSS, Excel, SQLite, Advanced Data Handling
- **Cloud Computing**: Cloud Infrastructure, Distributed Systems, Service-Oriented Computing
- **Visualization**: **Matplotlib**, **Seaborn**, **Plotly** (interactive dashboards), GraphPad Prism
- **Emerging Tools**: **Qiskit** (quantum computing), **PennyLane** (quantum ML)
- **Software**: MS Office, Adobe Illustrator, EndNote, Maple, LabVIEW
- **Proficiency**: Advanced in ML/DL development, computer vision, data management, and optimization; skilled in cloud computing and quantum applications.

OTHER SKILLS

Other Skills

- **Teaching & Leadership**: Designed curricula, led committees, trained **200+ students**, awarded **Best Master Trainer (2022)**.
- **Analytical Problem-Solving**: Developed predictive models and optimization solutions with **25%–90% performance gains**.
- **Communication**: Delivered seminars (e.g., Topological Data Analysis) and technical workshops.

PROJECTS

Projects Lists

PROJECTS
Projects Lists
View my data science and ML project portfolio on GitHub: github.com/muhammadimranDE/MuhammadImran_AIDeveloper-MLEngineer_Portfolio

- Detection Transformer (DETR): Implemented a DETR model in PyTorch for end-to-end object detection, tested on COCO dataset—streamlining CV with transformers.
- Detection Using Kalman Filter for Motion in Computer Vision: Built a Kalman Filter in Python/PyTorch to track motion across 99 frames in horse videos (COCO dataset), using IoU-based Hungarian matching, with video outputs—enhancing real-time tracking.
- Object Detection with YOLO: Developed a PyTorch-based YOLO model for real-time object detection on educational imagery—optimizing CV performance.
- Error Minimization through Polynomial Approximation: Created a Python model reducing error by 25% in 2D and higher-dimensional test cases—mastering optimization.
- Sentiment Analysis with BERT: Fine-tuned BERT with Transformers for student feedback, achieving 90% improved accuracy—boosting educational insights.
- Quantum ML Exploration: Simulated quantum circuits with Qiskit from NHR workshop for ML tasks—pioneering quantum applications.
- Predictive Student Performance Model: Built a Scikit-learn model with 85% accuracy for student outcome prediction—enhancing EdTech analytics.

- Interactive Enrollment Dashboard: Developed a Plotly dashboard, adopted by administration, driving 10% enrollment growth—visualizing key trends.
- Student Attendance Tracker: Created a Python/SQL system, improving efficiency by 15%—streamlining EdTech processes.
- Topological Data Analysis: Applied persistent homology in a 2024 seminar, analyzing real-world datasets—uncovering hidden patterns.

HONOURS AND AWARDS

Certification and Awards

- **Best Master Trainer of Mathematics**, Punjab Education Dept., 2022
- **Sir Syed Award for Best Teacher**, Punjab Education Dept., 2020
- **Best School Teacher Award**, Punjab Education Dept., 2018
- **Mathematics Award**, Punjab Education Dept., 2019
- **Certification of Appreciation**, Punjab Education Dept., 2021
- **Best Motivator Award**, Punjab Education Dept., 2021
- **Star Teacher & Cash Award**, Punjab Education Dept., 2017
- **Chief Minister's Youth Initiative Award**, Punjab Govt., 2012
- **NHR Workshop on Quantum Computing**, Göttingen, 2025

CONFERENCES AND SEMINARS

Conferences

NHR Workshop on Quantum Computing for Scientific Research, Göttingen, Germany, February 2025 (upcoming)
- Focus: Quantum simulation, algorithms, and Quantum Machine Learning (QML) with Qiskit and PennyLane.

Seminar Talk: Topological Data Analysis, Georg-August University of Göttingen, 2024

NETWORKS AND MEMBERSHIPS

Pakistan

Members

- Member, Punjab Educators Association of Mathematics
- Member, Young Mathematician of Pakistan
- Member,Young Data Scientists of Pakistan
- Member,Machine Learning Engineers Pakistan

RECOMMENDATIONS

Dr. Muhammad Idrees Assistant Professor University of Education

Mr. Muhammad Imran excelled during his B.Sc. (Hons) Mathematics and B.Ed. at the University of Education, Lahore (2008–2012), mastering linear algebra, statistics, and pedagogy. His analytical skills and dedication earned him the Chief Minister's Youth Initiative Award (2012). I strongly recommend him for his foundational expertise and commitment.

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Malik Abu Sufyan Dogar Principal Govt High School

"Mr. Muhammad Imran excelled as a Mathematics and Computer Science Educator at Govt. High School, Khanqah Dogran (2014–2023), skillfully integrating data science into teaching and supervising impactful lab practicals. His leadership in enrollment and discipline initiatives, coupled with awards like Best Teacher (2020), reflect his dedication and innovation. I strongly recommend him for his technical proficiency and educational excellence."

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