

MUHAMMAD BILAL KHAN

Data Engineering | Python Automation | Machine Learning

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SUMMARY

Final-year Computer Science student who designed a PostgreSQL database that is now deployed and in use, and built Python pipelines that cut weeks of manual work to about one. Experienced in data cleaning, schema design and workflow automation through internships at CTD Sindh and ORIC. Seeking a data engineering or data science role, with a long-term goal of AI engineering.

EDUCATION

BS Computer Science | University of Karachi Expected Nov 2026
Intermediate, Pre-Engineering | Adamjee Government Science College Mar 2022

CORE SKILLS

Languages: Python, SQL, JavaScript, Java, C++
Data & Analysis: pandas, NumPy, openpyxl, Jupyter Notebook, Matplotlib/Seaborn, scikit-learn, Power BI, Excel
Databases: PostgreSQL, MySQL (schema design, queries, ORM)
Backend & Tools: Django, Django REST Framework (JWT), Postman, Git/GitHub, Celery, Redis

EXPERIENCE

Intern, Data & Database Systems | CTD Sindh Aug 2026 – Oct 2026

- Cleaned, preprocessed and extracted data for a sensitive departmental dataset using Python (pandas, NumPy, openpyxl), SQL and Excel.
- Designed the PostgreSQL schema and created the tables (managed in pgAdmin); the system is deployed and in active use.
- Collaborated with a backend developer on FastAPI CRUD endpoints and a Flutter front end, as part of an MOU internship program with the University of Karachi.

Intern, Process Automation | ORIC, University of Karachi Aug 2026 – Oct 2026

- Built a Python pipeline that collected University event posts through the Meta Graph API (JSON and images), classified event posts with keyword rules and the Gemini API, and generated one-page PDF scorecards; completed the remaining 6.5 months of the year in about one week versus an estimated 7–8 weeks manually.
- Replaced paper attendance with an offline local-network system (router and QR code) that works without internet access.
- Automated bulk certificate generation and email delivery for workshops and trainings (see Projects).

Django Developer Intern | Devsinz Intern Connect (Remote) Nov 2024 – Dec 2024

- Designed the PostgreSQL schema (custom user model, primary and foreign keys, constraints) for a multi-category blogging platform using the Django ORM on a cloud-hosted database.
- Built RESTful APIs with Django REST Framework: JWT authentication, role-based permissions, category filtering, pagination and title/author search; added regex-based text-to-HTML formatting.

CERTIFICATIONS

Microsoft Certified: MLOps Engineer Associate | Azure ML and MLOps | tinyurl.com/mbk-ms Jul 2026
Data Mining & Business Intelligence | IBA | Excel, Power BI, Power Query, data mining Dec 2025
Fundamentals of Deep Learning | NVIDIA Apr 2025
Machine Learning, AI & Data Science | eHUNAR | 6-month Python ML and data science program Jan 2025

PROJECTS

Meraki & Segno | Python, Tkinter, SMTP 2026
github.com/mbilalkhan704/Meraki github.com/mbilalkhan704/Segno

- Conceived and built a certificate automation workflow in Python: bulk generation from CSV/Excel (about 400–500 certificates in 5–10 seconds), email validation with invalid-row highlighting, and Gmail SMTP delivery; packaged as Tkinter desktop apps (GUI built with AI assistance).

PneumoScan-AI | Python, TensorFlow, Keras, OpenCV Apr 2025
tinyurl.com/PneumoScan-AI huggingface.co/spaces/mbilalkhan704/pneumonia-classifier

- Built a CNN-based chest X-ray classifier on the Kaggle Chest X-Ray (Pneumonia) dataset, reaching 92% test accuracy, and deployed it as a live Gradio demo on Hugging Face Spaces.

The Legacy Fitness | Java, JavaFX, MySQL (XAMPP) | Team of 2 Oct 2024

- Designed the relational schema and built an admin-only gym management system with modules for members, trainers, equipment, finance and a dashboard.