

Talha Ijlal

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SUMMARY

A lifelong learner shaped equally by classical and modern traditions, I began with memorizing the Quran and completing the Dars-e-Nizami, gaining deep grounding in logic, language, and disciplined thought. I later pursued a formal degree in Computer Science, where I found a natural extension of that intellectual rigor—applying it to the design of systems, automation of processes, and extraction of insight from data. This dual foundation has made me a principled and creative problem solver, comfortable moving between abstract reasoning and practical execution.

WORK EXPERIENCE

Lead Data Engineer at DigiLawyer July 2024 - Present

- Implemented the data pipeline, fetching data from multiple sources, cleaning and restructuring them, and then feeding to the **PostgreSQL** Database. This also included **vectorizing** the data by contextual **embeddings** using **OpenAI** and **Gemini**'s text embeddings models.
- Employed **Qdrant** and then **pg_vector** to store vectors in **PG17**. Also used **MeiliSearch** and then **pgsearch** for Full Text Search **FTS**.
- Shifted the database from **Dockerized instance** to **Kubernetes** cluster. Worked with Elastic K8s Service **EKS** as the destination for the database migration. Also worked with engineering team to setup the cluster.

Data Engineer at Adara - A Rategain Company Jun 2023 - July 2024

- Automated the alerts and **Salesforce** case creation for Support in case of delivery failure. This was done using **Apache Airflow DAGs** which was scheduled to run every hour to check for delivery failures. The environment was setup using **Google Composer**.
- Developed a pipeline to get the DV360 audience sizes for the active segments at Adara's end, and perform basic **analysis** based on sent and displayed sizes, trigger **automated actions** for segments refresh based on the analysis. Tools and Technologies used in this project included **Google API and Services**, Pandas and other Python libraries.
- Designed the workflow for Adara's FBR process which involved writing **Scheduled Google BigQuery queries**, sync services, hosting on **Compute Engine** and uploading of files using **SFTP**. Worked with TC and Data Science teams closely to get the automation part done correctly.

Teaching Assistant at University of Engineering and Technology Lahore Fall 2022 - Spring 2023

- Conducted weekly programming lab sessions, assisting over 30+ students in grasping fundamental coding concepts.
- Guided 50+ students in the successful completion of semester projects, resulting in a 20% increase in project quality compared to the previous semester.
- Led review sessions, improving exam performance by 15% through targeted clarification of complex OOP principles and collaborated with faculty to develop innovative teaching materials, enhancing the overall learning experience for 200+ students.
- Led exam review sessions focused on clarifying complex concepts targeted examples and discussions. Worked closely with faculty to redesign and refine teaching materials, ensuring they were engaging, accessible, and aligned with student needs. These efforts collectively enhanced the learning experience for over 200 students across multiple sections.

PROJECTS

Digitizing Pakistan's Statutes and Codes

DigiLawyer

Leading the digitization of Pakistan's legal statutes and codes, involving **modeling** a structured schema for legislative documents, **setting up** infrastructure for high-throughput digitization, **coordinating** the team for pipeline execution, and **ensuring** zero-downtime ingestion into DigiLawyer's production database.

ETL pipeline for Binary data files

DigiLawyer

Developing an ETL pipeline for **Legal tech startup**, which involves **scraping** judgements from multiple judicial courts' site, **processing** them using **LLM** (OpenAI's GPT 3.5) to get summary, and uploading them to DigiLawyer's Database, hosted on Digital Ocean's **Virtual Machine** setup with Linux **Ubuntu**.

Feed pipeline for an OC store

SecondBite

Designed and developed a pipeline to **extract** data from multiple sites, **transform** it for the OC feed format, perform the match check with the existing data and **load** the new entries OR update the previous one based on the latest data. This involved **Selenium** for driving **ChromeDriver** for scraping, **Pandas** for simple transformations and **Google Sheets API** to interact with Gsheets.

EDUCATION

2021 - 2025	Bachelor's of Computer Science	UET Lahore	(3.54/4.0)
2016 - 2024	Dars e Nizami	Wifaq Ul Madaris	(Jayyad)
2019 - 2021	FSc. Pre Engineering	BISE Lahore	(1015/1100)
2017 - 2019	Matriculation (Science)	BISE Lahore	(1065/1100)
2015 - 2016	Hifz ul Quran	Wifaq Ul Madaris	(Mumtaz)

SKILLS

Automation	Python, Selenium, Chromedriver, Apache Airflow DAGs
Cloud	GCP (BigQuery, Google APIs), AWS (EC2 instances, EKS), Azure (Virtual Machine)
Database	MySQL, PostgreSQL (pgsearch, pg_vector, pgvector scale), MongoDB, Qdrant, MeiliSearch
Data analysis	Pandas, NumPy, Looker Studio
Web Scraping	Requests, bs4, IP rotating, captcha solving
DevOps	Docker, Kubernetes (K8s)
Also worked with	NodeJS, ExpressJS, Flask, RESTful APIs, GraphQL

SCHOLARSHIPS AND AWARDS

Prime Minister's Laptop	Under PM's Youth Program for academic excellence	2023
Dean Honour Roll Student	Secured 3.7+ GPA in Semester	2023
Academic Excellence Award	Secured 97% Marks in High School	2019
Brain of Lahore	Won at an inter-school district competition	2019

AREAS OF INTEREST

- Graph Theory
- Network Analysis
- Intersection of Classical Theology and Modern Science

EXTRA CURRICULAR ACTIVITIES

Director Cyber Security	MLSA	2023
Member UET Literary Society	Member of poetry and prose guild	2022
Rafeeq	Islami Jamiat e Talba	2018