

Muhammad Abbas

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PROFESSIONAL SUMMARY

Focused **Data Engineer** with a **Bachelor's in Computer Science** from **Habib University**, Distinguished for experience in **Rust** and **Data Science** on top of experience with **Data Engineering tools**, with a track record of collaboratively and independently delivering **convertible PoCs** and then developing **production tools** that saves several runtime hours of cloud machines for fintech industry. Well versed in architectural planning for Big data. Delivering well-documented, tested, and operable code. Efficient in collaborating and communicating new ideas and opinions and evaluating the existing ones

TECHNICAL SKILLS

Languages : Rust, Python, Scala, C/C++, Golang, SQL (Postgres, MSSQL, MySQL), NoSQL (MongoDB), HTML, CSS, JS (basic)
Data Eng. Tools : Spark, NiFi, Airflow, Databricks, Informatica
Software Frameworks : Axum, Actix, Django, Flutter, RestFramework
AI Frameworks : Tensorflow, PyTorch, JAX, NumPyro
Cloud, DevOps and API Tools : AWS, Azure Cloud, GCP, Git, Docker, Kubernetes, Postman, Linux (Longtime Desktop User)
Others : Polars, Pandas, Design Patterns, Debugging, Root Cause Analysis, Architecture Planning, Working with JSON & Parquet

EXPERIENCE

- Data Engineer I** | *Logiciel Services LLC.* — United States *Full-time | May 2024 — Present*
- Developed Rust pipelines for EOD processing of FIX logs to CAT files, C# pipeline previously running in 500mins, got optimized to 50mins with Rust & Nifi, saving around 400 mins daily on AWS machine.
 - Orchestrated the data ingestion, transformation and AI pipelines through airflow DAGs, triggering pipelines of Nifi, Spark, Rust and AI (Python) on daily basis.
- Junior Data Engineer** | *ImproData* — Victoria, Australia *Part-time | Dec 2023 – March 2024*
- Worked on Azure Databricks (PySpark) for risk management of cyber-security data, building bronze, silver and gold layers.
 - Worked on automated pipeline dev using GCP Cloud Functions to transfer compressed json bulk data from local to GCS & population to BigQuery
- DevOps Intern** | *Pullflow Inc.* — San Jose, California *Full-time | July 2023 - Aug 2023*
- Worked on AWS EKS (Kubernetes) and Docker as I was responsible for designing & implementing the infrastructure that was on AWS to on-premise server.
 - Worked on Budibase Dashboarding & hosting it on pullflow subdomain using traefik for loadbalancing.
- Data Engineering Intern** | *United Bank Limited* — Karachi, Pakistan *Full-time | May 2023 – Jun 2023*
- Built a pipeline using Informatica for streaming ingestion of UBL's data from Qatar & Bahrain in Hive Data Lake.
 - Participated in architecture analysis of data ingestion to datalake of data from UBL Qatar & Bahrain to ensure that the production AI pipelines running in realtime on UBL Pak's data can be used for data from Qatar & Bahrain.
- Student Mentor** | *Habib University* — Karachi, Pakistan *Part-time | Aug 2023 – May 2024*
- Teaching Assistant for Data Structures & Algorithms: Assisted students during labs and with assignments.
 - Git & Github Workshop Instructor: Conducted two workshops on Git and GitHub.
 - Teaching Assistant for Data Structures & Algorithms: Assisted students during labs and with assignments DSA.

EDUCATION

Habib University	Bachelors' in Computer Science GPA : 3.31	<i>August 2020 – June 2024</i>
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PROJECTS

- Astroflow (FYP)** | *PyTorch, Numpyro, Django, Postgres, SQLite, Javascript* *Aug 2023 - May 2024*
- A Deep Learning framework to estimate population parameters of Binary Black holes under the leadership of RIT instructor, the framework was based on Normalizing flows for inference and Neural Nets for summarization and Feature extraction from unseen data.
 - A Dashboard built with Django and Postgres that allows inferring from the model for the uploaded data and visualizing the results.
- Ferroflow (LS)** | *Rust* *June 2024 - July 2024*
- A rust framework inspired by Nifi for data transformation (ETL), contains processors and utilities that can be used to build production-ready pipelines.
- Metosi (LS)** | *Python, LangGraph, SQL* *Sept 2024 - Present*
- A financial multi-agentic chatbot that queries the SQL database attached to our data-lake in realtime based on the user's input and provides the relevant information in natural language.
 - It also understands the financial dictionary, can parse FIX logs and do other day-to-day tasks in FinTech, removing other teams' dependency from developers.
- Infaaq NGO (Community Service)** | *Django, Flutter, Nodejs, React, HTML, CSS, Postgres, Javascript* *Aug 2023 - Dec 2023*
- A Django Web-app with react frontend for web and flutter for Android and iOS that allowed users to register, volunteer, submit funds, apply for participations on NGO events etc and had relevant admin panels and user roles with role-based access control.