

Ahsan Tariq

+92-3228791599 | ahsantariq0724@gmail.com | [linkedin.com/in/ahsan-tariq-0724/](https://www.linkedin.com/in/ahsan-tariq-0724/) | github.com/ahsantariq7

PROFESSIONAL SUMMARY

I am a Python developer with hands-on experience in Web Development, Machine Learning, Data Science, Generative AI, Web Scraping, Web Automation, and Model Integration. Proficient in LaTeX for report writing and skilled in both Windows, MacOS, and Linux (Debian, Ubuntu) operating systems. Experienced in FastAPI, Django Rest Framework, and Langchain. Eager to contribute to cutting-edge projects in a dynamic environment that fosters growth and collaboration.

EDUCATION

Bachelor of Science in Computer Systems Engineering 2020-24
The Islamia University Bahawalpur Pakistan

AWARDS AND CERTIFICATIONS

- On Merit Selection IN PMYP Laptop Scheme By Government
- Data Analysis With Python, FreeCodeCamp, Intro to SQL, Kaggle, Intro to Machine Learning, Kaggle, Intermediate Machine Learning, Kaggle, Data Visualization, Kaggle Feature Engineering, Kaggle, Data Mining And Business Intelligence, Navttc,

PUBLICATIONS

ResearchGate: | 08-07-2024 Main Author

A Python Package For Summarizing University Student Examination Performance

Asian Journal of Economics, Business and Accounting: | 18-01-2025 Reviewing

Certificate of Excellence in Reviewing

CREATIVE WORK

1- **ISGC 2- Emotion Analysis (PYPI Modules)** | *Python, Git*

1- IUB GPA Cal. 2- Deep Learning

- ISGC Developed For Islamia University Students to calculate SGPA or CGPA.
- Emotion Analysis provides tools for emotion detection using transformer-based models. It includes functionalities for preprocessing data, generating word clouds, visualizing statistics, bigram, trigram. This package implements the FRNN algorithm with OWA weights for evaluating model performance.

Laptop Monitoring System | *Python, OpenCV, smtplib*

Windows, Linux

- The Laptop Monitoring System is a Python-based application designed to enhance security or monitor usage patterns. It captures images of laptop users upon startup, suggesting it might be utilized for security purposes or monitoring user activity. The system sends email alerts, which could be notifications to system administrators or owners about unauthorized access attempts or simply to keep track of usage.

EXPERIENCE

Backend Software Engineer

Aug 2024 – Present

Artilece

Lahore, Pakistan

- Contributed as a Data Engineer on the Qpharma project, utilizing AWS services such as S3, Lambda Functions, Glue, and JupyterHub for efficient data processing and analysis. Employed pandas for feature engineering, merging, and cleaning large datasets. Debugged complex data pipeline errors to ensure smooth workflow execution. Integrated data from multiple sources, including Microsoft Excel, and used Excalidraw to create detailed flowcharts for visualizing data pipelines and processes. Extracted data from various social platforms, including Twitter, YouTube, and LinkedIn APIs, applying tagging and coding in Python. Additionally, worked on publications and trials, and incorporated Jira and Excel formulas into the project.
- Backend Developer for 2456.ai – an AI-driven workflow automation platform. The project utilizes Pinecone as a vectorized database (vector store) and PostgreSQL for structured data management. Django is used for platform management, while FastAPI powers microservices for high-performance API interactions. Users provide queries, which are refined and enhanced using AI, retrieving relevant suggested tools from the vector store to dynamically generate workflows. The platform enables users to save workflows, integrate Stripe for seamless payments, and implement a referral system to drive engagement. Ensured code quality with Ruff for linting and formatting, implemented pre-commit hooks for maintaining code integrity, and optimized system performance.

- Worked on the NVIT Project. I developed the complete backend for the website, which included comprehensive authentication, SSO, complete validations, and exception handling. The system was designed for different user roles such as customers, engineers, and admins. I integrated OpenAI for time estimation and created a Jira-like ticket duplication system where only customers could create tickets. Additionally, I implemented hour calculations, runtime calculations, transaction histories, and allowed admins and engineers to update ticket statuses. The project included checkout URLs and connectors for AWS, Azure, IBM, Oracle, and GCP. I also added recommendation features, recommendation calculations, and enabled users to leave comments, ensuring that only users with a subscription could create tickets. also I store data like images e.g profile pics, subscription images, ticket images on Microsoft Azure. Live Testing: <https://jerichoai.io>
- Expert data extraction assistant for Seanz Firm, an immigration law firm in Texas - The project conducts interviews in Spanish or English, handling a comprehensive intake questionnaire seamlessly. It integrates with OpenAI's GPT-4 for advanced natural language processing, ensuring smooth and intelligent interactions. Interview data is stored in e.g. Google Sheets, MongoDB, PostgreSQL for efficient data management. Additionally, the project uses Twilio to send SMS and WhatsApp messages, enhancing communication capabilities. Ruff is employed for linting and code formatting to maintain code quality. Use Google Looker Studio For Data Visualization.

Vectorized Database Software Engineer

Feb 2025 - Present

InstaMailAI

USA

- Designed and optimized vector search pipelines for fast and accurate retrieval using MongoDB Atlas and Langchain, enhancing data retrieval efficiency. Developed and fine-tuned embeddings for structured and unstructured data, integrating OpenAI models to improve intelligent data processing and response generation.
- Implemented retrieval-augmented generation (RAG) workflows, optimizing vector database performance for scalability and real-time applications in email processing. Managed structured and semi-structured data using MongoDB, focusing on performance optimization, indexing, and efficient data storage strategies. Created robust email processing systems, including message retrieval, filtering, and response generation, leveraging advanced message processing techniques.
- Utilized Python frameworks such as FastAPI for backend development, ensuring seamless integration of AI-powered features and enhancing user experience in email management. Ensured high-quality data handling and processing through the implementation of clean HTML extraction and email address normalization functions.
- Collaborated with cross-functional teams to design and implement scalable solutions for intelligent email management and vectorized data retrieval.

Beginner Python Developer

July 2021 – June 2023

Hostera

Bahawalpur

- Developed a Machine Learning models as ML Engineer.
- Developed a web application using Django and Docker.
- Integrate ML models too in web applications. Use Trello For Project Management and Git as Version Control System.

Python Developer On Fiverr

July 2022 – Present

Freelancing Platform

Self-employed

- Communicated with clients to facilitate order placements.
- Provided post-delivery support and revisions to ensure client satisfaction.
- Maintained a 5-star rating through consistent excellent service and client feedback.

TECHNICAL SKILLS

Languages: Python, SQL (Postgres, MYSQL, SQLite3), JavaScript, HTML/CSS, JQuery, Latex

Frameworks: Django, React, DRF

Developer Tools: Pep-8, Git, Docker, VS Code, Jupyter Notebook

Libraries: Django-Allauth, Djrestauth, pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, tensorflow, Wordcloud, Ckeditor, Pygame, Postman

Volunteer: In the event of Robotics And Cybernetics of IEEE, Executive Member - University Admission Guidance, Executive Member - IMS, IT Manager - Everything is Possible

LEARNING GROWTH

AI Machine Learning: Deep learning, NLP, reinforcement learning, and model optimization

Performance Scalability: Profiling, load testing, and high-performance computing (HPC)