

# Azka Hasan

Python | Data Analysis | ML | AI

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Transferable Iqama Al Khobar, Saudi Arabia

## Career Summary

MIT-certified IT professional with 8+ years of experience, including 4 years specializing in Data Science and Machine Learning model development, deployment, automation, and data-driven solutions. Proficient in Python, R Language, ICD-10cm with strong command of TensorFlow, scikit-learn, Pandas, and UI/UX design for impactful data visualization and product interfaces. Experienced in teaching and mentoring, with a passion for translating complex concepts into actionable insights and intuitive user experiences.

## Professional Experience

### Data Analyst Consultant Jan 2025 – Present Riyadh, Saudia Arabia-based Curriculum

(Remote Learning Projects)

#### ICD-10 Disease Analytics Console | Python

- Developed a Python-based console to streamline hospital data analysis.
- Implemented ICD-10 lookup, patient record search, and dataset analysis with visualizations.
- Built an NLP-based feature where doctors' notes (symptoms) are automatically mapped to ICD-10 codes.
- Tools: Python, Pandas, FuzzyWuzzy, Matplotlib.
- Designed as a proof of concept for healthcare analytics; extendable to predictive models (e.g., LOS prediction).

#### Facial Emotion & Reel Mood Detection 2025 | Personal Project (Freelance AI Research)

- Developed a deep learning solution to detect emotional patterns from selfies and short video reels.
- Used **CNN (Convolutional Neural Networks)** and OpenCV to classify emotions like happiness, anger, sadness, fear, etc.
- Built a lightweight frontend to upload a selfie or reel, which returned emotional state.
- Designed for mental health support — alerts triggered to trusted contacts if critical patterns (e.g., distress) are detected.

projects included work for companies serving US-based clients in data processing, AI automation, and analytics dashboarding.

#### R Projects (Online Learning)

- **Survey Data Insights** – Transformed raw HR survey data (2,000+ responses) using tidyR, performed statistical summaries, and produced actionable reports in R Markdown.

## **Python Developer Aug 2022 – 2025 NodeBook Private Limited (Freelance/Remote Karachi, Pakistan)**

Some of Technical Projects which I worked on:

### **CO2 Data Analysis and Prediction**

- Conducted CO2 time-series analysis and found Polynomial Linear Regression to be the most accurate forecasting model.
- Compared SVR, Linear, and Decision Tree regressions using train-test splits to evaluate predictive accuracy.

### **Temperature Comparison of Two Companies**

- Analyzed temperature data from GISTEMP and GCAG using decision trees and regressions, achieving top accuracy with decision tree models.
- Compared model outputs across years, validating performance through statistical metrics.

### **Flower Species Classification using Logistic Regression**

- Built a logistic regression model achieving 100% classification accuracy on flower species, supported by confusion matrix visualization.
- Applied train-test split, normalization, and output scaling for optimal model performance.

### **Image Classification with Artificial Neural Networks (ANN)**

- Developed ANN models using TensorFlow/Keras and OneHot encoding for MNIST image classification.

## **UI/UX Designer Mar 2020 – June 2024 Appverse Technologies (Remote Lahore, Pakistan)**

- **Gym App** – Designed responsive UI/UX with wireframes, mockups, UX mapping, and prototype animation using Figma and Adobe XD.
- **Notebook App** – Built intuitive note-taking interface with wireframes, mockups, UX mapping, and prototype animation using Figma and Adobe XD.
- **Restaurant App** – Created mobile-first UI/UX for menu browsing and ordering with wireframes, mockups, UX mapping, and prototype animation using Figma and Adobe XD.

## **Lecturer – Application Software Jan 2014 – Dec 2016 ISP University, Multan**

- Delivered academic courses on Microsoft Access, Microsoft office, C++, and Visual Basic.
- Mentored students in practical software development and design projects.

## **Computer Science Teacher Mar 2012 – Dec 2013 Nusrat-ul-Islam School, Multan Pakistan**

- Delivered computer science instruction using differentiated teaching methods to accommodate diverse learning styles and abilities.

## **Networking Intern Jun 2011 – Aug 2011 Wateen Networking, Multan Pakistan**

- Assisted in maintaining network infrastructure and diagnosing technical issues.

## Certifications



AI Powered Startups and Innovations



Cloud Computing and Windows Azure



Python with Machine Learning



Digital Assessment Development



Networking for Home and Small Business

## Technical Skills

- **Programming & Tools:** R (data cleaning, wrangling, transformation, statistical analysis, ggplot2, dplyr, tidyr), Python, TensorFlow, scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, OpenCV
- **Machine Learning & Deep Learning:** Regression, Classification, Neural Networks, CNN, ANN, NLP
- **Data Tools & Platforms:** Google Sheets API, Jupyter Notebook, Google Colab
- **UI/UX Design:** Figma, Adobe XD (if applicable), basic frontend layout knowledge
- **Soft Skills:** Technical training, mentoring, team collaboration, problem-solving

## Education

### Cyber Security Training TryHackMe – SOC Level 1 (In Progress)

Learning Security Operations Center fundamentals, log analysis, threat detection, and SIEM tools

### Masters in Information Technology (MIT) Bahauddin Zakariya University, Multan Pakistan

(2010 – 2013)

Completed a comprehensive certification from MIT covering key areas such as **Networking, C++, Programming fundamentals, HTML, Accounting principles, HR management systems, and Logical Gates Operations**. Developed a strong foundation in both technical and business domains, supporting a well-rounded IT and data science skillset.

### Bachelors in Computer Science (BSC) Bahauddin Zakariya University, Multan Pakistan

(2008 – 2010)

Computer Science, Economics, and Geography, combining technical and analytical foundations.

## Continuous growth

Oracle APEX, GraphRAG, Google I/O Extended 2025

## Languages

English    Fluent

Urdu      Native