Adeeba Rafi

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EDUCATION

Hazara University Mansehra, Pakistan

Bachelor of Science in Computer Science | GPA: 3.44 / 4.0

2020-2024

Relevant Coursework: Data Structures & Algorithms, Artificial Intelligence, Natural Language Processing, Database Systems, Operating Systems, Computer Networks, Object-Oriented Programming, Human-Computer Interaction, Information Security, Python Programming

ACHIEVEMENTS

- **IELTS:** Overall, 6.5 band score
- @LeetCode: Solved 40+ Data Structures & Algorithms problems(Link)
- Solved all 9 out of 9 puzzles in CS50x Puzzle Day 2025 organized by Harvard University(Link)
- @lablab.ai: Participated in 4+ International Hackathons(Link)
- International DOGE Hackathon: Created AI tax assistant chatbot that helps people & government(Link)
- Participated in **Advent of code 2024** & solved competitive guestions for 25 days(Link)
- Ranked 133rd out of 536 teams internationally in the MIT Winter Coding Contest 2025(Link)
- Al for connectivity hackathon: Built an Al tool to predict & optimize IT infrastructure maintenance, improving system reliability(Link)
- Alstronauts Space Agents on a Mission Hackathon: Collaborated in a team to develop *The Smart Space Habitat Manager*, an Al-powered system for real-time space habitat management(Link)
- Participated in the 2024 CALICO UC Berkeley Coding competition (Link)
- Generative AI Hackathon with IBM Granite Summary: Developed BizNexus-AI, an AI-powered analytics
 platform that helps businesses overcome data fragmentation by providing predictive insights and automated
 decision-making across HR, e-commerce, and business intelligence(Link)

TECHNICAL SKILLS

Programming Languages: Python, HTML/CSS/Bootstrap, C/C++, Flutter/Dart, C#

Machine Learning & Deep Learning: PyTorch, TensorFlow, Keras, Scikit-Learn, Streamlit

Operating Systems: Windows, macOS

Developer Tools: Git, GitHub, Google Colab, Jupyter Notebook, PyCharm, Visual Studio

Al & Data Science Platforms: Hugging Face, Kaggle

ACADEMIC PROJECTS

Real-Time Facial Landmark Detection System | (GitHub)

- Developed a system using OpenCV and MediaPipe to track facial features in live video, identifying key landmarks on a person's face in real time. This project showcased the integration of computer vision and machine learning for applications like augmented reality and emotion detection.
- Technologies Used: OpenCV, MediaPipe, Python
- Key Learnings: Real-time image processing, facial feature tracking, and practical implementation of computer vision techniques

Salon Booking Application | (GitHub)

 Developed a salon booking application that allows women to book appointments from home, browse available services, and view beauticians along with their charges.

- Integrated an AI-powered chatbot for automated customer support, enhancing user interaction & providing real-time assistance.
- Technologies Used: HTML, Bootstrap, Firebase, Flutter/Dart

Translation App | (GitHub)

- Developed a multilingual translation app using Streamlit and MarianMTModel from Hugging Face, enabling real-time text translation across various languages with an intuitive user interface.
- This project demonstrated the integration of NLP models with interactive web applications.
- Technologies Used: Streamlit, MarianMTModel, Hugging Face, Python
- **Key Learnings:** Natural language processing, model integration, and building user-friendly AI powered applications.

WORK EXPERIENCE

Change Mechanics Pvt. Ltd | (Link)

Jan 2024 – March 2024

App Developer

- Built cross-platform apps using Flutter & Dart.
- Implemented Firebase Authentication & Firestore for data management.
- Developed Cloud Functions for backend automation.
- Designed responsive UI with HTML, CSS, and Bootstrap.

LEADERSHIP & VOLUNTEER EXPERIENCE

Teaching Experience |

ICodeGuru, USA (Remote)

Python Programming Instructor

Sept 2024 - March 2025

- Led Python programming sessions for 100+ underprivileged students, covering core topics like variables, data types, input/output, loops, and functions
- Conducted classes via Zoom, created quizzes and assignments, and supported students in building a strong programming foundation

Volunteer Experience

Hazara University, KPK

Graphic Designer

2020 -2024

- Designed posters and social media content to promote student project exhibitions and STEM awareness at the university
- Assisted faculty in organizing weekly on-campus events by providing visual materials and event coordination support

Leadership Experience

Lablab.ai, California

Hackathon Team Leader

2024 –2025

 Led two hackathon teams as a team leader, where I learned to manage time under pressure, communicate clearly, and coordinate tasks effectively to keep the team focused and deliver results on time

INTERNATIONAL HACKATHONS & COMPETITIONS

Al Tax Assistant Chatbot | <u>DOGE Hackathon</u> | (Demo Video | GitHub)

- Worked on the chatbot's front-end UI, designing and developing the interface for a seamless user experience.
- Worked on project documentation and presentation, explaining the chatbot's functionality, architecture, and real-world impact.
- Tech Stack: HTML, CSS, Bootstrap, Python, Flask, PostgreSQL, BERT, Hugging Face

Maintenance Predictive System for Data Centers | Al for connectivity hackathon | (Demo Video)

- Worked on developing an interactive UI using Gradio, allowing users to interact with the predictive system.
- Built the predictive AI model, analyzing CPU load, storage usage, and temperature to forecast maintenance needs.
- Tech Stack: Python, Pandas, NumPy, Scikit-Learn, Gradio, Hugging Face

Smart Space Habitat Manager | Alstronauts Space Agents on a Mission Hackathon | Demo Video

- Worked on implementing AI models for optimizing oxygen supply, temperature control, and astronaut health monitoring.
- Worked on project documentation and presentation, highlighting technical solutions and resource optimization strategies.
- Tech Stack: Python, Streamlit, Pandas, NumPy, Scikit-Learn, Random Forest Regressor, Render

Coding Competitions

- Qualified for the UC Berkeley Coding Competition, competing against top programmers and refining my algorithmic thinking.
- Actively participated in Advent of Code, solving daily challenges that pushed my problem-solving skills and logical reasoning.
- Ranked 133rd out of 536 teams internationally in the MIT Winter Coding Contest 2025, a testament to my
 perseverance and ability to tackle complex problems under pressure.

REFERENCES

Waqas Ahmed: Doctoral Researcher, Murdoch University, Australia (Waqas.ahmed@murdoch.edu.au)

Dr. Ali Syed Saqlain: Ph.D., Artificial Intelligence, Beijing, China, Assistant Professor at Dept. of CS, GPGC (saqlain.ncepu@gmail.com)

Syed Zulqarnain Shah: Lecturer at Dept. of Computer Science, GPGC (zulqarnain@gcm.edu.pk) **ANDRIAMBELOZAKA Tianasoa Avotriniaina Liane:** CEO/Founder of Maternal AI, Madagascar (anielandriam26@gmail.com)