#### 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

#### **TECHNICAL SKILLS**

**Programming Languages:** Python (1+ year), HTML/CSS/Bootstrap (1 year), C/C++ (3 years), Flutter/Dart(1 Year)

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

Operating Systems: 4 years - Windows; 2 years - macOS

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

AI & Data Science Platforms: Hugging Face, Kaggle

#### **ACHIEVEMENTS**

• **IELTS:** Overall, 6.5 band score

- @LeetCode: Solved 40+ Data Structures & Algorithms problems(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 questions for 25 days(Link)
- Ranked 133rd out of 536 teams internationally in the **MIT** Winter Coding Contest 2025(Link)
- AI for connectivity hackathon: Built an AI tool to predict & optimize IT infrastructure maintenance, improving system reliability(Link)
- **AIstronauts Space Agents on a Mission Hackathon:** Collaborated in a team to develop *The Smart Space Habitat Manager*, an AI-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)

## **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.
- Front-end Technologies: HTML, Bootstrap
- **Database:** Firebase

• Mobile Application: Flutter

### **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)

Sept 2024 – March 2025

Python Programming Instructor

- 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

## AI Tax Assistant Chatbot | DOGE Hackathon | (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 realworld impact.
- Tech Stack: HTML, CSS, Bootstrap, Python, Flask, PostgreSQL, BERT, Hugging Face

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

- Worked on developing an interactive UI using Gradio, allowing users to interact with the predictive system.
- Worked on 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.