

Abdul Rafay Ashfaq

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Islamabad, Pakistan

EXPERIENCE

Machine Learning Intern Jun 2025 – Jul 2025
DevelopersHub Corporation Remote

- Engineered conversational AI agents for medical and mental health diagnostics using NLP techniques.
- Fine-tuned LLMs with HuggingFace Trainer API and developed Python scripts for real-time user interaction.
- Executed end-to-end data pipelines, including Exploratory Data Analysis (EDA) and data cleaning on clinical datasets to identify key features for heart disease classification.
- Trained regression models for house/stock price forecasting, implementing time-series analysis on preprocessed metrics.

Web Developer Intern Jun 2025 – Aug 2025
Premier NX Lahore, Pakistan

- Architected responsive, user-centric frontend interfaces for an academic portal utilising the Laravel framework.
- Implemented full-stack CRUD functionality, ensuring seamless data synchronisation with a MySQL backend.

Python Developer Intern May 2025 – Jul 2025
Softsincs Remote

- Completed comprehensive data science training, mastering Pandas and NumPy for data preprocessing.

EDUCATION

Bachelor of Science (B.S.) in Computer Science Aug 2027
FAST National University of Computer & Emerging Sciences Islamabad, Pakistan

- Coursework: Data Structures, Design & Analysis of Algorithms, Object-Oriented Programming, Computer Networks, Artificial Intelligence, Web Programming, Software Design & Analysis, Information Security

PROJECTS

Automated Game-Playing Agent for TORCS

- Developed an automated car racing simulation using PyTorch, integrating a Forest Model for autonomous driving behaviour to obtain telemetric data.
- Trained the model on sensor-based input to optimise speed and steering in dynamic racing environments.
- Implemented real-time decision-making and performance evaluation to enhance model accuracy and responsiveness.

Ultimate Tic-Tac-Toe

- Developed a player vs. AI Tic-Tac-Toe game in Python, incorporating Minimax Algorithm with Alpha-Beta Pruning for efficient decision-making.
- Implemented advanced Constraint Satisfaction Problem (CSP) techniques to enforce game rules.
- Optimised user experience through interactive GUI, enhancing gameplay realism and challenge.

XONIX

- Developed a classic arcade game with modern GUI and gameplay mechanics using C++ SFML.
- Implemented player movement, enemy AI, and dynamic territory capturing logic using DSA concepts.
- Enhanced user experience with responsive controls, real-time scoring, and engaging visual feedback.

Hospital Management System

- Built a full-stack HMS using React for the frontend and Node.js with MongoDB for the backend.
- Implemented secure user authentication and role-based access control using JWT.
- Developed features for patient management, appointments, and medical records with a responsive UI.

SKILLS

Web Development Tools: HTML, CSS, JavaScript, React.js, Node.js, PHP, Laravel, MongoDB

Game Development Tools: Unity, SFML (Simple & Fast Multimedia Library)

Programming Languages: C++, Python, Java, SQL (MySQL), x86 Assembly

CERTIFICATIONS

[Google AI Essentials Specialisation – Google](#) • [Introduction to Artificial Intelligence – University of Illinois Urbana-Champaign](#) • [Introduction to Generative AI for Developers with Copilot – Microsoft](#)