Abdul Rafay Ashfaq

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Islamabad, Pakistan

EXPERIENCE

Machine Learning Intern   Jun 2025 – Jul 2025
DevelopersHub Corporation   *Remote*
- Designed chatbots for medical queries and mental health support. Fine-tuned LLMs with HuggingFace Trainer API and constructed Python scripts to exchange messages with the user.
- Cleaned and performed EDA on medical datasets. Trained a heart disease prediction model on derived insights.
- Trained regression models for house/stock price prediction on preprocessed metrics and time-series data.

Web Developer Intern   Jun 2025 – Aug 2025
Premier NX   *Lahore, Pakistan*
- Designed responsive and user-friendly interfaces for an online academic portal with Laravel.
- Optimised SQL queries for enhanced performance and integrated CRUD operations with the frontend.

Python Developer Intern   May 2025 – Jul 2025
Softsincs   *Remote*
- Gained experience in data handling and preprocessing with CSV and Pandas.

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, MongoDB, React.js, Node.js, PHP, Laravel
Game Development Tools: Unity, SFML (Simple & Fast Multimedia Library)
Programming Languages: C++, Python, Java, SQL, x86 Assembly
Soft Skills: Team Collaboration, Communication, Critical Thinking

CERTIFICATIONS

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