# Abdul Rafay Ashfaq

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Lahore, 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 constructed 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 | On-site*

- *Architected responsive, user-friendly frontend interfaces for an academic portal utilising PHP Laravel.*
- *Implemented full-stack CRUD functionality, ensuring real-time 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

***Game-Playing Agent for TORCS***

- *Automated a car racing simulation using PyTorch, integrating a Random Forest Model for autonomous driving behaviour to extract 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 accuracy and responsiveness.*

***Ultimate Tic-Tac-Toe***

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

***XONIX***

- *Created a classic arcade game with modern GUI and gameplay mechanics using C++ with SFML.*
- *Programmed 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.js for the frontend and Node.js with MongoDB for the backend.*
- *Implemented secure user authentication and role-based access control using JSON Web Tokens (JWT).*
- *Developed comprehensive modules for patient management, appointments, and medical records.*

## SKILLS

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