Hasan Waqar

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Career Objective / Profile:

Aspiring Artificial Intelligence engineer with a strong foundation in computer vision, deep learning, and software development. Motivated to apply technical expertise to real-world challenges through research-driven and data-centric projects.

Education:

Bachelor of Science in Artificial Intelligence, National University of Computer and Emerging Sciences (FAST), Islamabad, Pakistan
Aug 2022 – Present

Relevant Courses: Object-Oriented Programming (OOP), Data Structures and Algorithms (DSA), Programming for AI (Numpy, Pandas, Matplotlib, NLTK), Image Classification and OCR, Software Engineering, Calculus I & II

Skills:

- Python (NumPy, Pandas, Matplotlib, OpenCV, PyTorch)
- Machine Learning & Deep Learning
- Computer Vision & Image Processing
- C++ & Object-Oriented Programming
- Data Structures and Algorithms
- Web Development (Basic)

Experience / Internships:

Intern, Enterprise Solutions Department, Nayatel — Islamabad, Pakistan (Oct 2023 – Nov 2023)
- Developed a web-based application for face detection using computer vision techniques.
- Implemented efficient algorithms to locate human faces in images and videos.

Projects / Research:

Built-Up Fractional Mapping with Deep Learning: Implemented deep learning models (FCN, U-Net, Attention U-Net) on Sentinel-2 imagery to map built-up areas. Used GDAL for geospatial data and applied Huber Loss for improved prediction accuracy.

Chess AI with Alpha-Beta Pruning: Developed an AI bot for chess using the Minimax algorithm with alpha-beta pruning and board evaluation heuristics.

Text & Image Similarity Engine: Built a system for retrieving similar text and images using tokenization and feature-based similarity matching.

Street Fighter AI Bot: Trained an ML model to predict and counter opponent moves in real-time, integrated into a custom game engine.

Wall Breaker Game: Created a 2D arcade game in C++ with collision logic, scoring system, and OOP design principles.

Forex Price Prediction System: Built a real-time EUR/USD forecasting model using LightGBM and MT5 data. Predicted short- and mid-term price movements and visualized performance through live charts.

Achievements / Extracurricular Activities:

- Participated in multiple AI and software development projects demonstrating teamwork and research skills.
- Contributed to university-level hackathons and coding competitions.
- Engaged in continuous learning through online AI and ML courses.