EMAN FATIMA

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PROFESSIONAL SUMMARY

Cybersecurity specialist and final-year BS Cybersecurity & Digital Forensics student (CGPA 3.50) at The Islamia University of Bahawalpur with hands-on experience in threat detection, blockchain security, AI-based anomaly detection, and digital forensics. Published researcher (ICACNC 2025) with proven leadership in team projects, technical event hosting, and IEEE cybersecurity programs. Seeking to apply practical skills in a challenging cybersecurity role.

EDUCATION

BS in Cybersecurity and Digital Forensics — CGPA: 3.50 *2025 – Graduated*
The Islamia University of Bahawalpur *Bahawalpur, Pakistan*

- Relevant Courses: Network Security, Cyber Forensic Analysis, Cryptography, Artificial Intelligence

PROFESSIONAL EXPERIENCE

Cybersecurity Intern *Jul 2025 – Sep 2025*
National Cyber Crime and Forensics Lab *Islamabad | Hybrid*

- Applied backend development skills in a cybersecurity research environment.
- Performed sentiment analysis, gender detection, and speaker diarization with accurate labeling.
- Prepared technical reports and presented findings with clarity and professionalism.

Artifical Intelligence Intern (CMIT 2025) *Jan 2026 – Jun 2026*
BuiltinSoft *Rahim Yar Khan | Onsite*

- Implemented Markov Chain algorithms and chatbot logic for conversational AI features.
- Developed Django REST APIs for an e-commerce clothing platform.
- Performed data cleaning, feature engineering, and trained ML models including KNN, K-Means, Random Forest, Linear Regression, SVM, and Decision Trees.

PROJECTS

Healthcare Security with Blockchain & AI Anomaly Detection (Final Year Project) | *Python, Ethereum, IPFS, React.js, Web3.js, Random Forest, Flask*

- Designed a secure hospital management system using Ethereum smart contracts for role-based access control and IPFS for decentralized data storage. Integrated AI-based anomaly detection (Random Forest) to identify suspicious login patterns and prevent unauthorized access. Live at: healerplus.live

Audio Forensics & Digital Tampering Detection | *Python, OpenAI Whisper, DistilBERT, JavaScript*

- Web-based platform to detect digital tampering in audio files using Whisper for transcription and DistilBERT for NLP-based authenticity analysis.

AI-Based Phishing Detection & Threat Analysis Platform | *Python, Flask, Scikit-learn, Random Forest, TF-IDF/NLP, WHOIS/DNS, Pandas*

- Full-stack cybersecurity platform detecting phishing across URLs, emails, and web content in real-time. Performs URL feature extraction, NLP-based email analysis, domain reputation checks, and WHOIS/DNS lookups. Outputs risk scores with confidence levels and threat classifications (Safe / Suspicious / Phishing).

AI-Based Traffic Sign Recognition System | *Python, OpenCV, TensorFlow, Scikit-learn*

- Trained a deep learning model on the German Traffic Sign dataset (Kaggle) to detect and classify traffic signs using computer vision techniques.

Exploratory Data Analysis & Advanced ML Algorithms | *Python, Pandas, NumPy, Matplotlib, Seaborn, Scikit-learn, DBSCAN, Jupyter Notebook*

- End-to-end data science project covering EDA (missing values, outlier detection, correlation heatmaps) and benchmarking of six ML algorithms including DBSCAN for spatial anomaly detection.

Image Classifier — Cat vs Dog with Confidence Threshold | *Python, TensorFlow/Keras, CNN, OpenCV, Streamlit*

- CNN-based deep learning classifier with confidence-threshold logic to categorize uploaded images as Cat, Dog, or Unknown Animal with per-class confidence scores.

Quran Pronunciation Checker — AI Recitation Evaluator (In Progress) | *Python, OpenAI Whisper, Wav2Vec2, HuggingFace, PyTorch, FastAPI, Streamlit*

- AI-powered recitation evaluation system that records user audio, compares phoneme-level pronunciation against renowned Quranic reciters, and returns word-by-word accuracy scores.

PUBLICATIONS & RESEARCH

Enhancing Healthcare Security with Blockchain and AI-Based Anomaly Detection

Eman Fatima, Rao Sharif Mansoob, Muhammad Shoaib, Iftikhar Rasheed, Umar Fayyaz — Accepted: ICACNC 2025

- Proposed a secure hospital data system using Ethereum blockchain, IPFS, and AI anomaly detection to prevent brute force attacks. Smart contracts enabled secure logins; Random Forest achieved high accuracy in detecting suspicious patterns.

Blockchain and AI in Healthcare Security: A Comprehensive Review of Anomaly Detection Approaches

Eman Fatima et al. — Submitted to JAIR (Under Review)

- Comprehensive literature review on blockchain and AI-driven anomaly detection in healthcare, examining security, privacy, and real-world deployments such as Estonia's eHealth infrastructure.

CERTIFICATIONS & TRAINING

- Generative AI and Deep Learning Boot Camp — May 2025 | Practical skills in GenAI, neural networks, model training & deployment
- Introduction to Microsoft Azure Cloud Services — In Progress | VMs, cloud storage, networking, identity management
- Manage Security Risks (Google) — Risk assessment, threat identification, incident response, enterprise IT security
- Foundations of Cybersecurity (Google) — Aug 2024 | Network security, cryptography, system hardening, threat detection
- AI for Beginners — ML basics, algorithm concepts, real-world AI applications

TECHNICAL SKILLS

Programming Languages:	*C++, Python*
Cybersecurity Tools:	*Wireshark, OWASP ZAP, Nmap, Threat Modeling Tool*
Digital Forensics Tools:	*Autopsy, FTK Imager, RAM Capturer, X-Ways, WinHex, Belkasoft*
AI/ML Frameworks:	*TensorFlow, Keras, Scikit-learn, OpenCV, HuggingFace, PyTorch*
Web & Backend:	*Flask, Django, FastAPI, React.js, Web3.js*
Blockchain:	*Ethereum, IPFS, Smart Contracts*
Cloud & DevOps:	*Microsoft Azure (In Progress)*
Other Tools:	*MATLAB, eNSP, Pandas, NumPy, Streamlit, Jupyter Notebook*

CORE COMPETENCIES

Strong Verbal & Written Communication • Team Leadership & Collaboration • Public Speaking & Technical Presentation • Analytical Thinking & Problem Solving • Adaptability & Time Management

LEADERSHIP & EXTRACURRICULAR

- Team Leader – University Lab Group (Image & Video Processing): Led a 5-member team on cybersecurity projects, coordinating task delegation, progress tracking, and technical implementation.
- Event Host – Departmental Farewell Functions: Managed logistics and hosted formal university events, demonstrating strong communication and coordination skills.
- Technical Host – IEEE Cybersecurity Events: Moderated expert panels, facilitated Q&A discussions, and presented technical cybersecurity content to diverse audiences.

LANGUAGES

English — Proficient | Urdu — Proficient