Ahmad Shamail

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Education

Master of Science in Computer Science 2024 - 2026
University of Arizona Tucson, Arizona
GPA: 4.00 / 4.00

Bachelor of Science in Computer Science 2020 - 2024
Lahore University of Management Sciences (LUMS) Lahore, Pakistan
GPA: 3.89 / 4.00
Awards: Dean's Honor List (2021 – 2024), Merit Scholarship (2020 – 2024),
NMF Gold Medal - Sportsperson of the Year (2024) – Male
Relevant coursework: Machine Learning, Data Science, Network Security, Topics in Internet and Network Security, Computer Graphics, Advanced Programming, Software Engineering

Technical Skills

Experienced: Python, LangChain/LangGraph, C/C++, Bash, Docker, Wireshark, Linux, React, TypeScript, JavaScript, SQL
Familiar: React Native, MongoDB, Express.js, Node.js, R, Haskell, Selenium, TensorFlow
Other: Unity, Git, OpenCV, PyTorch, LaTeX, LLMs/Transformers, HPC

Experience

AI-Engineer Intern* | *StruxHub (USA) | *June 2025 – August 2025* |
- Collaborated with the CEO to integrate AI-driven workflows into the platform using LangChain and LangGraph, streamlining construction form creation, recreation, and requests for on-site workers
- Developed AI-powered digitization of paper-based forms from images and PDFs, enabling construction site digitalization to improve conflict avoidance and increase planning speed by 70%
- Designed AI agent based solutions to generate daily and weekly site reports, saving teams 5-10 hours weekly while providing stakeholders with actionable insights into progress, setbacks, and improvement areas

Protein-Specific LLM Researcher* | *University of Arizona | *August 2024 – Ongoing* |
- Built data pipelines and GPU-optimized workflows to analyze neuron activations across millions of protein sequences, enabling large-scale study of protein representations.
- Developed a sparse autoencoder in PyTorch to enhance neuron specificity, with the goal of isolating signals tied to protein motifs, binding sites, and structural features.
- Designed evaluation and visualization tools to validate neuron behavior, supporting more accurate protein function annotation and structure prediction.

Systems Reproducibility and Vulnerability Researcher* | *SRI International | *May 2024 – August 2024* |
- Evaluated 66 datasets from eight provenance-based intrusion detection systems using deep learning, reproducing and benchmarking reported results
- Achieved exact match with published results in 6 evaluations and within two percent variance in 29 evaluations, revealing significant reproducibility gaps
- Published *Paper* in ACM-REP 2025 showing none of the systems were fully reproducible end to end, and delivered targeted recommendations on code completeness, dataset standardization, automated evaluation, and deterministic training

Projects

Turn-Based Pokemon Game [GitHub]
- Developed a 2D turn-based game in Unity, implementing game logic and mechanics using C# scripts and creating custom UI elements and audio integration
- Designed and implemented core game features including character interactions, battle systems, and progression mechanics, set in a virtual representation of my undergraduate college campus

Student Budgeting Application [GitHub]
- Developed a mobile budgeting application using React Native, implementing features for expense tracking, data visualization, and trend analysis to generate cost-saving recommendations