Farheen Akhter

San Bernardino CA   •   510-377-2570   •   Email | Linkedin | Github school | Github personal

PROFESSIONAL EXPERIENCE

CALIFORNIA STATE UNIVERSITY   San Bernardino, CA

Research Assistant   2024 - Present

Passionate AI researcher specializing in bias detection, fairness-aware ML, and deep learning, with published work in top conferences. Experienced in mentoring, DNN research, and AI applications in healthcare.

Selected Projects

- Developed Retrieval-Augmented Generation (RAG) applications for academic chatbot systems using Milvus and LangChain.
- Built fine-tuned LLM-based AI agents for document retrieval, academic advising, and semantic search.
- Designed AI-driven grant discovery tools using GCP's Vertex AI for automated research funding recommendations.
- Created cloud-based AI/ML pipelines for bias-aware deep learning models, optimizing performance on high-performance computing (HPC) clusters.
- Integrated Computer Vision models for real-time image-based facial recognition AI in a pet-reunification system.

Teaching Assistant   2024 - Present

Passionate AI researcher specializing in bias detection, fairness-aware ML, and deep learning, with published work in top conferences. Experienced in mentoring, DNN research, and AI applications in healthcare.

- Led Machine Learning & Data Engineering courses, covering ETL pipelines, NLP, and vector search databases.
- Provided lab support and hands-on demonstrations for core computer science courses, ensuring students gain a deep understanding of fundamental and advanced concepts.
- Led interactive Data Structures and Algorithms sessions, covering hashing, recursion, backtracking, graph theory, and dynamic programming with practical coding exercises in C++.

MOROCCAN DATA SCIENTIST   Morocco, Rabat

Data Scientist Intern   Feb 2024 – May 2024

Data Science Intern with experience in deep learning, computer vision, and AI-driven solutions. Developed a crop disease classification model, optimized accuracy through data preprocessing and fine-tuning, and built a scalable pipeline for real-world deployment. I am passionate about data-driven decision-making and AI applications in agriculture.

- Developed AI-based agricultural image classification models deployed on Google Cloud AI services.
- Implemented ETL pipelines for big data preprocessing, improving AI model training efficiency by 35%.
- Fine-tuned LLMs for domain-specific text generation in agriculture decision-making applications.
- Integrated AI-powered insights into BI platforms for predictive farm analytics.

[X]CUBE LABS   Hyderabad, India

Senior Software Developer   2021 – 2023

- Designed and implemented interactive Power BI dashboards, enabling 80% faster decision-making for farmers and agronomists.
- Led a front-end team of 12 developers in building a feature-rich web application for real-time crop monitoring and farm management.
- Built an end-to-end real estate portal handling 10k+ daily property search with interactive market insights.

- Developed scalable authentication & role-based access for users, ensuring 100% compliance with security standards.
- Engineered a scalable e-commerce platform, supporting 10K+ monthly active users with seamless product browsing and order processing.

VSN TECHNOLOGIES, INC   Hyderabad, India
Associate Software Developer   2015 - 2020

Passionate AI researcher specializing in bias detection, fairness-aware ML, and deep learning, with published work in top conferences. Experienced in mentoring, DNN research, and AI applications in healthcare.

- Developed a workflow automation system to track application progress, reducing manual intervention by 40%.
- Optimized database queries to improve response times by 35%, ensuring seamless user experience.
- Developed comprehensive policy management APIs for policy creation, renewals, claims, and endorsements.
- Built a scalable architecture to handle high traffic loads during peak insurance renewal periods.
- Ensured compliance with industry regulations, implementing data encryption and secure API authentication mechanisms.

EDUCATION

CALIFORNIA STATE UNIVERSITY   San Bernardino, CA
Master of Science in Computer Science and Engineering   Fall 2023 – Spring 2025

Focus: Artificial Intelligence, Machine Learning, and Deep Learning (Neural Networks)
EAD available starting May 2025 (2nd week), with OPT process already initiated, ready to contribute immediately upon authorization.

ADDITIONAL

- *Technical Skills*: Python (TensorFlow, Py Torch, Keras), SQL, Flask, Django, C++, Java, ReactJS, NodeJS
- *Publication and Research:* "Bias Detection in AI Models: A Fairness-Aware Approach"– Accepted in CAI 2025, prestigious IEEE conference, https://cai.ieee.org/2025/, Presenting on May 5-8, 2025.
- *Project Highlights:*
    - RAG-Powered Academic Chatbot → Implemented LLMs with RAG for academic assistance
    - AI-Driven Posture Recognition → Developed deep learning models for posture classification using pressure sensor-based image recognition.
    - Pet Finder, Grant Finder → Full stack applications involving face recognition, Computer Vision and AI Agent based RAG Chatbot development.
    - Semantic Search & Document AI → Built a vector database-powered document retrieval system for legal case analysis.
    - Cloud-Based AI Deployment → Azure-based MLOps pipelines, ensuring scalable AI model serving.
- *Competitions*: Participated in NVIDIA-Llama Index AI Competition, Oral presentation in CSUSB Research competition, Meeting of Minds Symposium, AI conferences presentations on research paper.