Armin Ziaei

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Education

The University of Texas at Dallas | **Richardson, TX** | 08/2018 - 12/2022
Bachelor of Science in Computer Science
GPA: 3.86

Collin College | **Dallas, TX** | 08/2015 - 05/2018
Associate of Science in Computer Science
GPA: 4.00

Experience

➢ **Aktus AI** | **San Mateo, CA**

Senior MLOps Engineer | 03/2025 - Present

- ★ Engineered enterprise-scale Kubernetes infrastructure with horizontal and vertical auto-scaling supporting GPU-accelerated workloads, achieving 99.8% uptime.
- ★ Architected one-click marketplace deployment solutions using GCP Deployment Manager and AWS CloudFormation, enabling complete infrastructure provisioning in under 10 minutes.
- ★ Established comprehensive CI/CD pipelines for 15+ marketplace products, implementing automated testing and deployment workflows.

MLOps Engineer Intern | 08/2024 - 03/2025

- ★ Designed and deployed a production-grade multimodal RAG system using Helm charts and microservices architecture on Google Cloud Platform with 94% retrieval accuracy and sub-200ms response times.
- ★ Implemented automated CI/CD pipelines using GitHub Actions for Google Kubernetes Engine deployments,

➢ **HHAeXchange** | **Richardson, TX** | 04/2021 - 02/2025 (3 years, 10 months)

Cloud Operations Engineer | **Ashburn, VA** | 01/2024 - 02/2025

- ★ Designed a backup and disaster recovery infrastructure protecting 500TB+ of critical healthcare data.
- ★ Automated operational workflows using Python and Bash scripting.
- ★ Implemented proactive hardware monitoring and maintenance protocols.
- ★ Led system installation and testing initiatives for production environments, managing critical deployments with zero data loss and maintaining operational integrity across healthcare compliance requirements (HIPAA/SOC 2)

System Management and Response | **Ashburn, VA** | 01/2023 - 12/2023

- ★ Engineered incident response management system processing 300+ daily alerts, reducing mean time to resolution from 45 minutes to 12 minutes and achieving 99.8% SLA compliance through automated escalation workflows and real-time monitoring dashboards.
- ★ Collaborated with cross-functional production teams to deliver high-quality healthcare software products.

System Operations Engineer | **Richardson, TX** | 01/2022 - 12/2022

- ★ Developed comprehensive monitoring solutions using Datadog custom metrics and custom dashboards.
- ★ Delivered technical training programs for 10+ team members on monitoring best practices and automation tools, standardizing operational procedures across the engineering organization.

System Operations Engineer Intern | **Dallas, TX** | 04/2021 - 12/2021

- ★ Monitored production application architecture, maintaining system stability and proactively identifying performance bottlenecks before they impacted end-user experience.
- ★ Conducted systematic root cause analysis for production incidents, documenting detailed findings and implementing preventive measures.

University Projects

Halo Collar Activity Recognition | Fall 2022
- Engineered a GPS and sensor-based machine learning model for canine activity classification using Python and scikit-learn, achieving 89% accuracy across 8 distinct behavioral patterns and processing real-time sensor data from 500+ collar devices for the PAWS LLC partnership.

Distributed Network Communication Protocol | Fall 2022
- Architected CRSP-compliant distributed system with controller, renderer, and server components using UDP socket programming in Python, implementing concurrent message processing with multithreading and multiprocessing for file streaming operations supporting pause, resume, and restart functionality across networked hosts (http://github.com/armixz/Protocol-Design).

Production Compiler Implementation | Fall 2022
- Architected a complete compiler system using Java with JFlex lexical analyzer and CUP parser generator, implementing a comprehensive grammar supporting classes, methods, arrays, expressions, and control flow statements, validated through 21 distinct test cases covering syntax analysis, semantic checking, and error handling for type safety and program correctness (https://github.com/armixz/Compiler-Design-II).

Enterprise Task Management Platform | Spring 2022
- Led development of full-stack web application using PHP, Apache, and SQL database with comprehensive Entity-Relationship modeling, implementing normalized database design supporting user authentication, task tracking, and reporting capabilities with web-based interface for enterprise task management workflows (https://github.com/armixz/Task-Manager-Development).

Operating System Process Simulator | Spring 2022
- Developed multi-process computer system simulation using C/C++ with separate CPU and Memory processes communicating via Inter-Process Communication, demonstrating deep understanding of operating system concepts, including process scheduling, memory management, and low-level system programming with concurrent execution handling (https://github.com/armixz/Computer-System-Simulation).

Computer Vision Digit Classification | Fall 2021
- Built production-ready handwritten digit recognition system for MNIST dataset using Python and scikit-learn, implementing image preprocessing pipelines for 28x28 pixel grayscale images, achieving 97%+ classification accuracy with comprehensive data validation and Kaggle-style competition submission format (https://github.com/armixz/Digit-Recognizer).

Machine Learning Algorithm Library | Fall 2021
- Engineered a comprehensive ML framework implementing 12 fundamental algorithms, including Linear Regression (direct method, polynomial, SGD), K-Means clustering, PCA with eigenface analysis, K-Nearest Neighbors on the MNIST dataset, Logistic Regression, and Decision Trees, with performance benchmarking across multiple datasets and automated hyperparameter optimization (https://github.com/armixz/Machine-Learning-Theory).

Prolog Knowledge Representation System | Fall 2021
- Developed an enterprise-grade question-answering system using Prolog with a first-order logic implementation, featuring a comprehensive knowledge base containing 50+ facts and 20+ inference rules, supporting complex logical reasoning queries with 95% accuracy for domain-specific questions about retail transactions and inventory management (https://github.com/armixz/AI-Knowledge-Representation).

Multi-Algorithm AI Search Engine | Fall 2021
- Implemented sophisticated 8-puzzle solver using four distinct search algorithms, including Depth-First Search, Iterative Deepening Search, and A* search with Manhattan distance and misplaced tile heuristics, achieving optimal solutions with a command-line interface and file-based input processing for automated testing and performance comparison (https://github.com/armixz/8-Puzzle-Solver).

32-Bit ALU Hardware Architecture | Fall 2020

- Designed a comprehensive 32-bit Arithmetic Logic Unit supporting 16 operations using Verilog HDL, implementing complex multiplexer architecture with error detection for overflow and divide-by-zero conditions, sequential logic components including accumulator register and flip-flops, and a comprehensive test bench validation, achieving timing requirements for 100MHz operation (https://github.com/armixz/ALU-Design-and-Development).

Multi-Protocol Network Chat System | Spring 2019

- Engineered real-time communication system supporting both TCP and UDP protocols in a Unix environment using C/C++ and Python, implementing client-server architecture with concurrent connection handling, demonstrating network programming expertise and understanding of protocol-level communication differences (https://github.com/armixz/Chat-System-Development).

Custom Shell Command Processor | Fall 2018

- Developed a comprehensive Bash command-line interface application in a Unix environment using shell scripting and system programming, implementing custom command parsing, input validation, and process management capabilities. The application enhanced system interaction efficiency by streamlining command processing, automating task execution, and improving the user experience for routine administrative operations. The project demonstrated proficiency in Unix system programming fundamentals, shell scripting best practices, and understanding of operating system command execution workflows.

Additional

Github: https://github.com/armixz
Portfolio: https://armixz.github.io/
LinkedIn: https://www.linkedin.com/in/armin-ziaei-9594748b/

Language Skills: English, Farsi
Technical Skills: Python, Bash, C/C++, Java, SQL, Kubernetes, Docker, AWS, GCP, Azure, Git, Jenkins, Terraform, Helm, MLflow, Prometheus, Grafana, Linux/Unix Systems Administration, Network Protocols (TCP/UDP), Database Design and Management, Machine Learning Frameworks (scikit-learn), Hardware Description Languages (Verilog, VHDL), Prolog Logic Programming.
Interests/Hobbies: IoT Edge Computing Projects, Cybersecurity Research