Ayman Reza *Software Engineer | Cloud, Data & Machine Learning*

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Education

Jan 2026 – Present
Champaign, Illinois
Master of Engineering, Electrical & Computer Engineering, *University of Illinois Urbana-Champaign*
Concentration: Machine Learning, Software Systems, Data-Driven Engineering

Aug 2022 – Dec 2025
Champaign, Illinois
B.S, Computer Engineering, Business Minor| GPA: 3.42, *University of Illinois Urbana Champaign*
Relevant Coursework: Machine Learning, Cloud Computing Applications, Statistical Inference for Engineering & Data Science, Statistical Learning Theory, Artificial Intelligence, Data Structures & Algorithms, Database Systems

Skills

Data Science & ML — Python, SQL, PyTorch, Pandas, NumPy, Data Analysis, Feature Engineering, Automated Pipelines

Cloud & Backend — Google Cloud Platform (Cloud SQL, Compute/Deployment), AWS, REST APIs, Node.js, MongoDB

Sofware & Systems — C, C++, Linux, Operating Systems, Memory Management, Git, RISC-V, SystemVerilog

Frontend — React, HTML, CSS

Professional Experience

May 2025 – Aug 2025
Niles, United States
Software Controls Engineering Intern, *Shure Incorporated*
- Analyzed sensor data streams and event logs to identify race conditions and logic faults in production systems
- Built Python-based tools to automate test workflows, analyze datasets, and support validation pipelines.

May 2024 – Aug 2024
East Chicago, Indiana
Software Systems Engineering Intern, *Cleveland Cliffs*
- Analyzed machine logs and sensor data to diagnose software-driven failures in automated systems.
- Developed diagnostic scripts and control logic to detect fault conditions and reduce unplanned downtime.
- Collaborated with engineers to validate fixes through controlled testing and data-driven verification.

Dec 2025 – Present
Remote
Machine Learning Evaluation Fellow (Part-Time), *Handshake*
- Provided technical evaluations and training data to improve machine learning model reasoning, accuracy, and task performance.
- Analyzed model outputs and provided structured feedback to improve reasoning quality and reliability.
- Worked with large datasets and automated evaluation pipelines.

Projects

Dec 2025
Cloud Data Platform for Plant Monitoring, *Python, SQL, React, Google Cloud Platform*
- Built and deployed a full-stack cloud application for logging, tracking, and visualizing plant data
- Designed relational SQL schemas and RESTful APIs for persistent data storage
- Implemented data visualization and trend analysis features
- Deployed backend services using Google Cloud infrastructure

Dec 2025
E-Bike Crash Detection & Safety System — Data-Driven Embedded System, *C, ESP32-S3, IMU Sensors*
- Developed real-time crash detection software using accelerometer and gyroscope data
- Applied sensor fusion and filtering to extract meaningful motion features
- Implemented event classification logic based on statistical thresholds and signal patterns
- Validated detection accuracy through iterative testing and data analysis

Jan 2025
Operating System — Systems Programming, *C, Linux*
- Implemented core OS components including memory management, multithreading, and filesystem
- Debugged low-level system behavior in a collaborative codebase

May 2025
Curing & Forming Machines — Software Control & Process Optimization
- Developed and optimized software for automated manufacturing equipment
- Diagnosed control issues using operational logs and system data

Dec 2024
JetPack Joyride — Real-Time FPGA Game System (Custom SoC Design), *FPGA, SystemVerilog, C*
- Designed and implemented a System-on-Chip (SoC) on an FPGA, featuring a custom CPU core, VGA controller for 2D scrolling graphics, and efficient memory systems for sprites and collision detection.
- Integrated hardware-software co-design using SystemVerilog and C to develop gameplay mechanics, score tracking, and USB keyboard controls for interactive gameplay.

Organizations

Feb 2023 – Nov 2024
Champaign, Illinois
Phi Kappa Psi Fraternity, *Philanthropy Chair*
- Led planning of fundraising and philanthropy initiatives, coordinating and managing teams
- Communicated with chapter leadership and external partners to ensure successful event outcomes