

Azim Usmanov

845-745-1867 | azimu@u.northwestern.edu | [linkedin.com/in/azimusmanov77](https://www.linkedin.com/in/azimusmanov77) | azimusmanov.com

EDUCATION

Northwestern University

Evanston, IL

B.S. Computer Engineering, Minor in Machine Learning and Data Science

Expected 2027

- **GPA:** 3.77/4.00
- **Relevant Coursework:** Data Structures & Algorithms, Operating Systems, Machine Learning, Microcontrollers, Parallel Computation, Probabilistic Systems, Multivariable Calculus, Linear Algebra, Differential Equations

TECHNICAL SKILLS

Languages: Python, C, C++, SQL, JavaScript, Java, MATLAB, VBA, HTML, CSS, Racket

Frameworks & Libraries: Node.js, FastAPI, React, OpenCV, MediaPipe, OpenMPI, PyTest, NumPy, Pandas

Cloud & Devops: AWS (S3, RDS, Lambda, API Gateway), Docker, GitHub Actions, Git, MySQL, PostgreSQL

Other Interests: Basketball (NY Knicks), Sailing, Weightlifting, Music Production, Skiing, Rail Systems

WORK EXPERIENCE

BriteCo

Evanston, IL

Software Engineer Intern

January 2026 – March 2026

- Migrated 10+ internal services from legacy APIs to a scalable backend architecture, improving maintainability
- Analyzed dependencies across 100+ repositories to identify API usage and support backend migration planning
- Modified repositories to support GitHub Actions with runtime secret injection into Docker images for CI workflows

ComEd

Joliet, IL

Software Engineer Intern

June 2025 – August 2025

- Automated Excel–Access data transfer pipeline by implementing a VBA script, reducing processing time by 45%
- Migrated 500+ pages of switch number records into a standardized Excel sheet, cutting lookup time by 53%
- Updated customer counts in SCADA for 20+ substations and their accompanying feeder lines using OMS data

The Garage at Northwestern University | Sensify Recycling

Evanston, IL

Software Engineer Intern

November 2024 – June 2025

- Collaborated in a team of 4 to build a Raspberry Pi data capture pipeline in Python, capturing images and uploading them to local storage and Amazon S3; implemented Python client that interfaced with the backend API
- Engineered a Python pipeline that detects objects, displays bounding boxes, captures images of items in focus
- Developed a testing script to compare classification accuracy and response time of various LLMs via API calls

Outlier AI

Remote

LLM QA Analyst

June 2024 – Sep 2024

- Evaluated AI-generated responses for both single-turn and multi-turn conversations from real user conversations
- Completed 70+ Reinforcement Learning from Human Feedback evaluations, improving API tool choice accuracy
- Wrote and refined testing prompts to train conversational LLMs in code, mathematical, and conversational work

PROJECT EXPERIENCE

YogaPal: Real-Time Yoga Pose Classification System | *Python, MediaPipe, OpenCV, Flask*

- Built a real-time yoga pose classification and correction system using MediaPipe Pose and a Random Forest model
- Designed a Flask UI backed by FastAPI to track reps, stream JSON feedback, and generate session summaries

Iron Man Gauntlet | *C, micro:bit v2, Breadboarding & Soldering*

- Constructed a replica Iron Man Gauntlet using Microbit, protoboard, modified 3D-printed SDK files, and a glove
- Developed drivers for LSM303AGR accelerometer, flex sensors, and pressure sensors to detect 3 distinct inputs
- Wrote main C program to continuously monitor inputs via voltage changes and sensor register reads, triggering one of three outputs (rainbow LEDs, 1W LED, or speaker) based on detected gestures, with $\approx 90\%$ accuracy

Gesture-Controlled Robotic Arm | *ESP32, C++, Arduino*

- Designed firmware for the HiWonder LeArm (6-DOF robotic arm) controlled via hand gestures using an MPU-6050 IMU (accelerometer) and flex sensor for real-time finger and wrist tracking

Campus Bus Tracker | *C++, OpenStreetMap API*

- Built a live bus tracking and navigation tool by integrating **OSM API**, covering 200+ buildings and 20+ stops