

Zaid Khan

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EDUCATION

Kennesaw State University

Bachelor of Science in Computer Science

- **Concentration:** Machine Learning and Artificial Intelligence

Atlanta, GA

Expected Graduation, December 2025

EXPERIENCE

Delta Air Lines

Atlanta, GA

Software Engineering Intern – Python, Microsoft Suite, AWS Cloud

May 2025 – August 2025

- Developed modular Python scripts using AWS Athena and the Pandas library to clean and validate large-scale GSE telematics data from 9 Delta hubs, applying timestamp alignment, outlier detection, and imputation techniques.
- Diagnosed and flagged malfunctioning telematics devices across 2 hubs using automated anomaly detection scripts, contributing to a reduction in diagnostic latency and improved uptime of critical GSE assets.
- Conducted EDA on airport usage trends to inform an ML-based GSE demand prediction model using Python and statistical clustering which supported long-term resource planning through time-based utilization patterns.
- Forecasted predictive maintenance (PM) schedules for baggage tractors, tow tractors, and belt loaders using Facebook Prophet, analyzing milestone data and aligning maintenance intervals with GSE actual usage hours.
- Collaborated cross-functionally with engineering, asset planning, and operations teams; participated in weekly networking and professional development events.

TriVec Builders

Marietta, GA

Full Stack Developer – HTML, CSS

June 2025 – Current

- Created a site for a local construction company to expand their reach and allow for easier contact and visibility.
- Utilized json API integrations to allow for live project updates allowing for better SEO optimizations.
- Implemented SEO strategies including semantic HTML structure and metadata tagging to improve site visibility and tracked them using Google Analytics.

KSU VEXU Robotics Team

Marietta, GA

OWL Robotics Programming Lead – C++

August 2022 – August 2024

- Led a programming subteam to develop control software for 8 VEXU competition robots using C/C++, contributing to a top 3 global ranking in both head-to-head and skills-based challenges.
- Designed and calibrated custom PID controllers in C++ using encoder and sensor feedback to improve motor response precision across varying speed regimes, reducing drift and overshoot in autonomous routines.
- Programmed autonomous and teleoperated routines for multi-subsystem robots including arm actuators, drive trains, and scoring systems, enabling successful navigation of complex game terrains.
- Managed Git workflows for a 13-member robotics team; onboarded and mentored new members on version control practices and C++ codebase structure to accelerate their integration and code contributions.

PROJECTS

Sustain Sync AI Engine | Docker, Django, Postgres, React, Python, JavaScript, CSS

August 2025 – December 2025

- Engineered and deployed a full REST API for utility bill analytics and sustainability goals with 9 production endpoints, integrating Django views, serializers, and PostgreSQL for reliable data ingestion and management.
- Designed and delivered AI analysis, forecasting, and recommendation services by integrating Prophet for time-series predictions, and building a RAG pipeline using FAISS retrieval and Ollama3.2.
- Built and optimized a React-based analytics dashboard by developing the GoalsManager component, integrating backend APIs, and enhancing UX with responsive styling and data-driven visualizations (React + Vite).
- Containerized and streamlined the development and deployment stack through Dockerfiles and Compose configurations with persistent volumes, health checks, and reproducible environments for CI/CD.

Live Traffic Sign Detection | Python, OpenCV, Pytorch

August 2024 – November 2024

- Developed a real-time traffic sign detection system using a ResNet-152 CNN trained on the GTSRB dataset, achieving reliable classification performance across multiple traffic categories.
- Implemented OpenCV-based video processing pipeline to capture live frames, preprocess input, and overlay top-1 label predictions with 68% accuracy on real-time footage.

ACTIVITIES AND LEADERSHIP

KSU VEXU Robotics Team

August 2023 – August 2024

- Managed 50+ members, lab logistics, and internal communication using Notion, Slack, Outlook, and Google Calendar; improved member retention and team organization.
- Mentored 20+ student robotics teams across GA and the Southeast, helping multiple novice teams qualify for the VEX World Championship.

TECHNICAL SKILLS

Languages: Java, Python, C++

Frameworks: Pytorch, Flask, AWS Athena, Django, Pandas

Developer Tools: Git, AWS Suite, Google Suite, Microsoft Suite, VS Code, Vercel, Heroku