Akash Kothari

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Experience

Software Engineering Intern Jun. 2025 – Sep. 2025
Tripleview Technologies (supporting Vision, ADG, and Mitchell Humphrey) *Mississauga, ON*

- Automated retrieval of Microsoft Teams call recordings using **Azure**, **Microsoft Graph**, and **C#**, reducing manual labour by **10+ hours per week** for the customer support team from Vision, ADG and MH
- Implemented webhook triggers, polling logic, and **AI-powered** summarization pipelines to process transcripts
- Integrated results into **Zendesk**, creating tickets with detailed summaries that cut agent writing time and reduced miscommunication
- Owned the full development cycle (design, coding, deployment, monitoring), delivering production-ready features that are being expanded into broader internal tooling

Volunteer Research Assistant (Part-time) Jun. 2025 – Sep. 2025
WatIMake, University of Waterloo *Waterloo, ON*

- Assisted a fourth-year student in building modular prototypes for a **Stewart Platform**–inspired teaching tool
- Supported experiments in **PID control** systems using **Python** on a **Raspberry Pi** with electromechanical setups (motors, webcam, sensors, and balancing mechanisms)
- Contributed to the development of lab modules aimed at teaching control systems and robotics concepts to **undergraduates**
- Collaborated with faculty and students in a **hands-on** research environment

Lead Math Instructor Sep. 2023 – Sep. 2025
Mathnasium of Lakeview *Mississauga, ON*

- Tutored a consistent group of 12–15 high school students in mathematics, specializing in **advanced algebra**, **calculus**, and **problem-solving**
- Assisted with administrative tasks, including grading assessments, tracking student progress, and filing reports
- Led small-group instruction and adapted teaching methods to diverse learning needs
- Mentored new instructors, enhancing **team collaboration** and center efficiency

Projects

FingerPointer | ***C++, MPU6050, ESP32, Circuit Design, Git*** Apr. 2025 – Jun. 2025

- Designed and built a wearable pointer device using an ESP32 microcontroller and MPU6050 accelerometer/gyroscope
- Implemented motion tracking and gesture recognition for directional control
- Developed firmware in Arduino C++ to process IMU sensor data and map orientation to pointer movement
- Designed custom power circuitry with a TP4056 charging module, 3.7V Li-ion battery, and boost converter for portability
- Explored potential accessibility applications, such as enabling alternative input methods for individuals with limited mobility

Self-Balancing Robot (Gyroscope Robot) | ***PID Control, Arduino, Hardware Prototyping*** Sep. 2024 – Jan. 2025

- Built a self-balancing two-wheel robot using an MPU6050 gyroscope + accelerometer for real-time measurement
- Implemented and fine-tuned a PID controller in Arduino to stabilize the robot and minimize oscillations
- Designed and assembled a custom polycarbonate frame, applying concepts of center of mass and structural stability

Technical Skills

Languages: Python, C/C++ (Arduino), Java, C#, JavaScript (ES6+), HTML/CSS, SQL
Frameworks & Platforms: React, Node.js, Unity, Azure, Microsoft Graph API
Developer Tools: Git, VS Code, Arduino IDE
Microcontroller Libraries: BleMouse, MPU6050_light
Hardware & Electronics: Arduino, Raspberry Pi, ESP32, MPU6050 IMU, Motor Drivers, PID Control Systems

Education

University of Waterloo Waterloo, ON
Bachelor of Applied Science in Computer Engineering (Co-op)