

ALWIN RAJKUMAR

Louisville, KY

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EDUCATION

Bachelor of Computer Science and Engineering, University of Louisville Fall 2022 - May 2026
Relevant Coursework: Data Structures and Algorithms, Discrete Structures, Embedded Systems. GPA: 3.3

SKILLS

Technical Skills: Python, C/C++, Flask, Java, MySQL, Git, Github, Ubuntu, Excel, Javascript

EXPERIENCE

Undergraduate Research Assistant Jan 2024 - Present
Louisville Automation and Robotics Research Institute *Louisville, KY*

- Developed computer vision algorithms (object classification, VSLAM, feature extraction) for drone ML systems using Python and PyTorch..
- Built an automated Google Scholar scraper (with YAML for weekly updates) and deployed it on GitHub Pages. Deployed the scraper on GitHub Pages for seamless integration.
- Assisted in cybersecurity research by developing a TCP server for API attack analysis.

Undergraduate Research Assistant Jan 2024 - Present
Leap Lab - University of Louisville *Louisville, KY*

- Co-authored “Expertise and Trust in GenAI,” examining engineering students’ trust in generative AI.
- Managed data collection and analysis, utilizing Excel to sort and prepare data for the data pipeline, ensuring accurate and organized data flow throughout the research process.

PROJECTS

2D Retro Space Invaders (C++, Raylib): Developed a fully functional Space Invaders game in C++ using Raylib, implementing collision detection, scoring, and game physics. Source Code: [GitHub](#)

MLS Binary Search Algorithm (C++): Created a C++ program to sort MLS players by salary using a Binary Search Tree, optimizing data retrieval from a .csv file. Try it: [GitHub](#)

Real-Time Chat App (Flask, Python, Socket.IO): Built a web-based real-time chat app with group chats and access code-based rooms, using Flask, Python, and Socket.IO. Source Code: [GitHub](#)

Classic Pong Game (Python, Pygame): Designed a 2D Pong game with dynamic ball speed and a retro-style interface using Python and Pygame. Source code : [GitHub](#)

LEADERSHIP

Operations Vice President July 2024 - Present
Speed School Student Council

- Served as a Student Government Association Senator.
- Authored a weekly newsletter that reached 3,000 engineering students.
- Coordinated Council communications through minutes of meetings.

Director of Council Infrastructure May 2024 - July 2024
Speed School Student Council

- Oversee inventory and distribution of items and door codes, and coordinate reservations for meetings and events.
- Maintain the rules and publicity of the council office.