

Arika Khor

Interest in autonomous systems, Software Architecture, and Digital Facial Recognition.

✉ arika.khor@gmail.com ☎ (720)-230-6723 🔄 Core310 🌐 somethingsomething.fyi 🌐 in/arikakhor/ 🆔 0000-0001-79891245

Education

Expected B.S. 2026 ,
M.S. 2027 | **The University of Oklahoma**
B.S. / M.S. Computer Science

Experience

June 2025 - Current	Construction Innovation and Analytics Lab <i>Researcher</i> - Implemented an autonomous 4-wheel differential drive robot navigating on a known dynamic construction site. - Used Nav2, ROS2, and multi-sensor fusion SLAM with a zed2i (depth camera) and Unitree LIDAR.
Aug 2025 - Current	Autonomous Interactive Robotics Lab <i>Researcher</i> - Passive Reinforcement learning visual-only autonomous navigation with Nvida Isaac Sim and Isaac Lab. - Implemented a smart intersection using a traffic controller with Multi-agent reinforcement learning robots
Sept 2022 - July 2024	Singapore Armed Forces <i>Team Lead for Curriculum Development</i> - Prediction based data analysis on Cadet scores using pandas. - Led a project to develop code to migrate from obsolete excel sheets that were used in trainee scoring.
Jan 2020 - Dec 2020	GameDuchy Game Development Company <i>Assistant Community Relations Manager</i> - Planned, organised and executed regular in-game community wide events, working with various departments to successfully implement these events. - Designed and implemented custom chat bot to obtain item data.

Leadership Roles

Aug 2024 - Current	Sooner Competitive Robotics <i>Various leadership roles</i> - Learnt about HSV color thresholding for object detection and localization. - Setup and managed Docker environments. Overhauled UI to add a live remote logging viewer, configuration manager, and overhead map. Overhauled data transfer from web socket to WebRTC request.
Aug 2016 - May 2022	Scouting America <i>Various Leadership Positions</i> Eagle Scout Project: Designed and built several weather radio antennas by organizing a large group to mass-produce them. They were then given to the city's emergency coordinator to distribute to public service buildings. This project was covered in the normantranscript (article here).
Aug 2024 - Current	Sooner Competitive Programming Team <i>Team Capitan (24-26, Team Advisor (26-27)</i> Attended 2025 and 2025 ICPC Programming competitions and hosted team practices solving kattis problems.

Projects

2025 - Current	Designing a Control System for Autonomous Cognition of Latent Hazards in Active Construction Sites <i>Paper, Abstract accepted to Smart and Sustainable Built Environment Journal</i>
2025 Hacklahoma	Facial-Net Classifier <i>Facial Recognition Project</i> - Fully local real time Facial Recognition suite to raise awareness about academia and policy making. - Captures live video then detects and matches faces in a crowd attempting to either match or generate a new face with mongodb. - Used quartz 4 and obsidan for documentation. - UI to merge/delete/assign saved faces using Streamlit and flask.

Technical & Soft Skills

- Programming: Advanced Java (Spring,Thymeleaf), C++ , C#, Java Script, Python, Bash
- Web: LaTeX, HTML5, CSS3, Bootstrap, Azure, AWS, SQL, MonogDB, Bun JS, React, WebRTC Concepts
- Tools & Concepts : ROS2, Pub/Sub Architecture, Docker, Jira, Jenkins , Git, Microsoft Office Suite, Agile, Scrum, tailscale.
- Soft Skills: Leadership, Interdisciplinary Teamwork, Communication, Problem Solving, Project management.
- OS and Machines: Debian, Windows, Jetson AGX Orin (Jetpack 6.2)