



# Mohammad Rouie Miab

+1 (314) 201-8713 ✉ [linkedin.com/in/mrouie](https://www.linkedin.com/in/mrouie) ✉ [mrouie15@gmail.com](mailto:mrouie15@gmail.com)



## Summary

A dedicated AI-focused computer scientist and engineer fervently passionate spanning areas like GenAI, vision, robotics, science, and emerging areas. With extensive hands-on experience, my core ambition is to make a transformative impact by advancing the worlds of both theory and application. I'm eager to apply these advanced methods to real-world challenges, driving innovation. I steadfastly champion a positive, focused, and results-driven ethos in every professional collaboration.

## Education

### Washington University in St Louis

Jan 2025 – Present

Computer Science, M.S. – Thesis (Expected May 2026)

### Missouri University of Science and Technology

Aug 2019 – Dec 2023

Computer Science, B.S.

Computer Engineering, B.S.

## Experience

### The Boeing Company — St. Louis, MO

June 2023 – Aug 2024

Government Training Engineering Software Intern, Agile Tools Team (extended)

- Developed utilities for seamless project data migration leveraging the Jira REST API.
- Crafted and maintained code for advanced project analytics and automation.

### Missouri S&T Multirotor Design Team — Rolla, MO

Jan 2020 – Dec 2023

Simulation Lead, Cross-Divisional Software Member • Aug 2022 – Dec 2023

- Led the Simulation sub-team, utilizing Unreal Engine 4 and AirSim to create realistic virtual environments for competition flights, enhancing strategy and preparedness
- Engineered a real-time obstacle detection utility for spinning LiDAR point cloud data.

Chief Software Engineer (CSE) • Aug 2021 – Aug 2022

- Spearheaded and roadmapped the software division utilizing agile methodologies and while facilitating team training, task allocation, and project delivery, filling in as needed.
- Assumed the early-departing technical lead's duties, actively participating in the multirotor stack's hardware-software integration and liaising with the hardware lead for progress.

Computer Vision Software Member • Jan 2020 – Aug 2021

- Innovated object detection processes, improving reliability against complex backgrounds.
- Conceived an obstacle persistence algorithm, providing vision avoidance capabilities.
- Optimized text detection algorithms, amplifying accuracy in challenging conditions.

### DE Design Works — Chesterfield, MO

May 2022 – Dec 2022

Embedded Software Engineering Co-op Intern

- Supported release cycles for Windows, ASP.NET, and QML embedded control projects.
- Analyzed and presented a report on various languages' feasibility for upcoming projects.

## Skills

### Languages and Libraries:

C/C++/C#, Python, JS, Rust, PyTorch, TF

### Technical Skills:

Creating ML datasets, Computer Vision, LSTM, diffusion model, and LLM frameworks.

## Projects and Research

- **Generative AI and Diffusion Models** – Enhanced semantic precision with latent space optimization
- **Thermo-Fisher Scientific Robotic Arm Project** – Object localization & tracking for assembly lines
- **AI Stock Trading Bot Project** – Customized LSTM model for predictive trading based on history
- **Multirotor UAV Vision Projects** – Object & obstacle classification, tracking, and avoidance systems