Daniel Johan
dwjohan12@gmail.com | 714-853-9836 | 2583 Mill Lane, Fullerton, CA 92831
https://www.linkedin.com/in/daniel-johan-739a55267/

EDUCATION

University of Notre Dame | Notre Dame, IN — Graduation May 2026
Bachelor of Science | Computer Science and Engineering — *GPA: 3.92|Dean's List*

SKILLS

Technical: Java, Python, Git, C, C++, HTML, CSS, shell, pydantic, PyTorch, openCV, Jupyter, Solidworks, CAD, MATLAB, Excel
Language: English (fluent), Indonesian (fluent), Chinese (conversational)

RELATED COURSEWORK

Operating Systems Principles, Data Structures, Algorithms, Computer Architecture, Introduction to AI, Data Science, Computer Vision, Probability and Statistics

EXPERIENCE

Center for Research Computing & Lockheed Martin | Notre Dame, IN — September 2024 – Present
Machine Learning Engineer Intern

- Leading the development and testing of Autonomous Agent simulation models for Lockheed Martin, leveraging predictive analytics and optimizing performance and reliability to further research initiatives.
- Spearheading the review and enhancement of existing code using LangChain and RAG, while creating robust environments to support efficient data processing and machine learning experimentation.
- Integrated the OpenAI API and structured output formats to enhance AI agents' reasoning and decision-making capabilities, improving their effectiveness and ability to provide clear, organized responses in search and rescue simulations.

Yaskawa | Kitakyushu, Japan — May 2024 – June 2024
Researcher

- Collaborated with a diverse team of Japanese university students and professors to develop and refine a calibration algorithm for a robotic arm used in robust conditions for microchip production.
- Performed rigorous testing, analysis, and iterative improvements to minimize error to less than 100 microns, significantly enhancing the precision and costs of the manufacturing process.

Kubota | Tokyo, Japan — July 2024 - August 2024
Researcher

- Designed and programmed an autonomous control system for a tractor in C, implementing a PID controller to optimize real-time adjustments, allowing the tractor to correct its trajectory and maintain a straight path after moving on uneven terrain, greatly improving efficiency in agricultural tasks.

PROJECTS AND ACTIVITIES

Object Tracking Robot | University of Notre Dame — January 2024- Present
Personal Project

- Designed and programmed a robot car to autonomously track specified objects using a supervised learning model trained on a large dataset for object recognition.
- Integrated a live camera feed with Raspberry Pi to enable real-time object tracking, allowing the robot to recognize and follow objects based on the trained model.

Notre Dame Robotic Football | University of Notre Dame — August 2023 - Present
Code Team Head

- Leading the code team for competitive robotic football matches, managing and optimizing robot programs on Raspberry Pi to enhance movement precision, throwing accuracy, controls, and overall performance
- Integrated computer vision techniques to detect and track targets in real-time with arUco markers, enabling the robot to make quick, precise throws under dynamic conditions.

CS for Good | University of Notre Dame — August 2022 - Present
Software Engineer

- Engineered and optimized a high-performance backend system using Django and Python, improving data retrieval speeds by 40% and reducing latency in user interactions.
- Designed and deployed a scalable database architecture with Django's ORM, enabling real-time progress tracking and analytics for 100+ students and educators.

CyberPatriot| Fullerton, California — July 2018 – May 2022
Competitor/Team Captain/Lead Instructor

- Led a top 30 ranked cyber security team out of 6000 teams in the national CyberPatriot competition for three consecutive years. Designed and deployed shell and Python scripts to automate cybersecurity protocols on Windows and Linux systems, enhancing defense mechanisms against potential threats.
- Led and organized year-long cybersecurity education sessions for over 200 K-12 students, covering critical real-world threats such as identifying and mitigating threats to Windows and Linux systems, including malware, cryptography, and remote access software.