HUNG (DYLAN) VO

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EDUCATION

Bachelor of Science, Computer Engineering | Minor, Computer Science **Graduating: May 2025**
University of Cincinnati, Cincinnati, OH GPA: 3.79/4.0
- Courses: Advanced Algorithms, Operating Systems, Embedded Systems, Computer Architecture
- Certificates: DeepLearning.AI Machine Learning Specialization, Python Data Science, & Machine Learning Tools

EXPERIENCE

Autonomous Robotics Programmer | *Digital Futures: Cincinnati, Ohio* **May 2024 – Aug 2024**
- Contributed to developing Ohio's Department of Transportation's project air-ground coordination with UAVs/drones and UGVs for robotic assistant scale of Cincinnati public constructions and highways
- Developed line following, road line detection with digital 400 x 600 images smoothed with filters, and control loops like PID controller, Kalman Filter for seamless adaptability with Python, OpenCV, and YOLO
- Planned creative simulation scenarios in Gazebo, as well as validated remote data distribution services, optimized code for cleanliness and runtime, and researched improvements for controls in more complex tracks

Software Developer | *EMG Education: Ho Chi Minh City, Vietnam* **Jan 2024 – Apr 2024**
- Automated workflow via Excel VBA and Word's Mail Merge to add for scheduled tuition payment management for finance and human resources departments, solving delay and repetition in paperwork
- Enhanced user-end chatbot applications with open-source language models such as Llama-2, Mistral, BERT and tools such as Azure, Poe, LangChain, HuggingFace for an expected server usage of 200 people
- Managed beta tests on application-level implementation of Retrieval Augmented Generation and aided prompt engineering on external knowledge for efficient contextually personalized features with FastAPI

Teaching Assistant for College Physics | *University of Cincinnati: Cincinnati, Ohio* **Aug 2022 – May 2023**
- Supported 80 students in-class by encouraging questions for any gap and coordinating out-of-class recitations in Physics, graded averagely 150 assignments per week

IT Master Data Management Intern| *WestRock Company: Atlanta, Georgia* **Sep 2022 – Dec 2022**
- Implemented Agile with CI/CD with information from the past quarter evaluation to build analytical workflow to optimize company's five-year plan with record tables worth of 2 million rows of data with SQL and DBeaver

SKILLS & PROFICIENCY

- **Language & Tools**: Python, C, C++, HTML, Git, CLI tools, SQL, mermaid, LaTeX, markdown, MATLAB
- **Frameworks**: scikit-learn, openCV, pandas, numpy, matplotlib, seaborn, FastAPI, Pygame, gymnasium, ROS 2
- **Technologies**: Electronics Instruments, Multisim, Verilog, LabView, Arduino, Raspberry Pi, Jetson Nano, Linux(Ubuntu), Microcontroller Embedded C, Sensors & Actuators, Jira, Microsoft Azure, MATLAB Simulink

PROJECTS

Robotic Arm for Neuro-rehabilitation after Stroke **Aug 2024 – Present**
- Collaborated with Mechanical Engineers to develop a two degree-of-freedom with an approach for series elastic actuation to promote human-friendly interaction in sensorimotor training for physical therapy recovery
- Maintained connection and reading of sensors with a data acquisition board for controls algorithms and handle output positions of the end-effector and managed testing and quality analysis via MATLAB Simulink and C

Micromouse Design – Robotics Club **Sep 2024 - Present**
- Modularized tasks for creating an autonomous maze-solving mouse with DC motors with encoders, infrared sensors, ultrasonic sensors controlled via Arduino Uno, Raspberry Pi, and other lightweight microcontrollers
- Deployed benchmarking for pathfinding algorithms, as well as efficiency tests on motor for trajectory planning

Game Development Library **Jun 2024 – Present**
- Designed nostalgic many 2D retro games such as Snake Xenzia, Tetris, Pong, and Breakout using Pygame, Tkinter, or with C++, SFML, and ImGUI as frameworks from scratch for conceptual understanding
- Rewrote a Pathfinding program and built simple Decision algorithms such as Behavior Trees for practice
- Leveraged Python and PyTorch to train Deep Q neural network, enabling for a self-learning agent with a current high score of 15 in the first 100 plays, developed roadmap for other games using Gymnasium library