RUSSELL ZHU

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EDUCATION

The Ohio State University – *Columbus, OH* Aug 2022 - Aug 2024
Master of Science in Computer Science and Engineering *GPA: 3.59*

- Coursework: Neural Networks, Natural Language Processing, Parallel Programming, Data Mining
- Project: Perception Pipeline Integration for Autonomous Driving
- Advisor: Wei-Lun (Harry) Chao

The Ohio State University – *Columbus, OH* Aug 2020 - May 2023
Bachelor of Science in Computer Science and Engineering | Specialization: Artificial Intelligence *GPA: 3.68*

- Coursework: Computer Vision, Machine Learning, Graduate Algorithms
- Awards: Land Grant Opportunity Scholarship | HackOHI/O X AWS Best Overall | ICPC ECNA 3-Time Qualifier

EXPERIENCE

Co-founder and AI Research Engineer Aug 2024 - Present
ADAS Startup *Columbus, OH*

- Design perception system that combines classical image processing techniques with deep learning models to provide lane detection, lane classification, and lane-change prediction for GPS-denied localization
- Develop data pipeline and hybrid annotation workflows using Python, CVAT, and custom pre-labeling scripts
- Enable real-time communication between connected vehicles, pedestrians, and roadside V2X infrastructure to enhance situational awareness and improve safety through proactive hazard detection and notification

Team Captain and Perception Team Lead Aug 2022 - Aug 2024
General Motors - SAE AutoDrive Challenge *Columbus, OH*

- Led a team of 60+ graduate and undergraduate students in building an SAE Level 4 autonomous vehicle
- Reengineered the ROS 2 Python perception pipeline reducing runtime to 60ms, expanded capabilities to process inputs from 3 camera, and developed a centralized visualization tool for all perception submodule results
- Finetuned detection and classification models receiving perfect scores for pedestrian, signs, and stop bars
- Trained 3D detection models using real KITTI data and AIODrive synthetic data; optimized with OpenVINO

Graduate Teaching Assistant - CSE 2221 Software Components Aug 2023 - Dec 2023
The Ohio State University *Columbus, OH*

- Instructed an introductory Java-based computer science course for 34 students, covering core concepts such as control flow, parameter passing, algorithms, data structures, recursion, and unit testing
- Supervised 2 teaching assistants, ensuring timely and constructive feedback for student assignments and exams
- Offered individualized support during lab and office hours, helping students understand complex concepts

Technology Intern - Analytics, Data Science & Automation May 2021 - Aug 2021
American Electric Power *Gahanna, OH (remote)*

- Refined 6 existing automation designs and independently developed an automation from design to deployment, eliminating over 1,500 hours of manual labor. Managed deployment of processes through UiPath Orchestrator

LEADERSHIP

Artificial Intelligence Club – Student Advisor, President, Treasurer May 2021 – May 2024

- Managed weekly meetings and led a team of 17 organizers across 6 committees to host HackAI 2023, attracting over 80 participants. Launched the inaugural Research Expo featuring 10 AI labs and engaging 70+ participants
- Coordinated a 7-part workshop series aimed at guiding students in creating their own AI project covering topics such as data analysis, feature engineering, and modeling which enhanced the technical skills of over 50 students

Competitive Programming Club – Student Advisor, President, Vice President May 2021 – May 2024

- Managed weekly meetings, delivered lectures on algorithms, coordinated 4 seasons of ICPC international contests, organized and judged 3 local competitions that saw over 300 unique participants from 35+ universities

PROJECTS

Memory Companion - HackOHI/O X AWS Best Overall Oct 2022

- Developed a personal AI assistant through Alexa to record events and retrieve memories for dementia support
- Integrated GCP Natural Language API to build a knowledge base, leveraging GPT-3 for conversational responses