

Yousef Sharrab

Contact Information:

Email: sharrab@isra.iu.edu.jo

Phone: +962-77-272-2871

Citizenship: Canadian & Jordanian

SUMMARY

Experienced Machine Learning Engineer with a strong focus on Perception and Computer Vision, contributing to cutting-edge autonomous driving technologies. Extensive background in AI, robotics, and machine learning, particularly in developing and deploying models for real-time perception systems. Proven expertise in working with connected and autonomous vehicles, V2V/V2I communications, and advanced neural network architectures. Passionate about solving complex problems in the fields of AI, mobility, and self-driving technology.

EDUCATION

PhD in Computer Engineering (Artificial Intelligence), Wayne State University, MI, USA
GPA: 4.0/4.0

Master of Science in Computer Science and Engineering, New York Institute of Technology, NY, USA
GPA: 3.72/4.0

B.Sc. in Electrical and Communication Engineering, Jordan University of Science and Technology, Jordan

RELEVANT SKILLS

Languages & Tools: Python, TensorFlow, Keras, R, MATLAB, C++, Java, SQL, ROS

Technologies: Deep Learning, 3D Geometric Computer Vision, Real-time Perception Systems, Reinforcement Learning, Optimization for Hardware Accelerators

Specialties: Autonomous Vehicles, Perception and Prediction Systems, V2V/V2I Communication, Neural Network Design for Self-Driving Technology

PROFESSIONAL EXPERIENCE

Assistant Professor

Isra University, Jordan (2021 - Present)

Developed and taught advanced courses in Deep Learning, Neural Networks, Computer Vision, and Robotics.

Led research focused on AI-based perception systems, autonomous vehicle safety, and hazardous material classification using deep learning.

Mentored students in AI projects related to autonomous driving and perception.

Research & Development Senior Engineer

General Motors R&D, Warren, MI, USA (2008 - 2021)

Spearheaded R&D efforts on perception systems for autonomous vehicles, focusing on real-time object detection and path planning.

Contributed to the development of V2V communication protocols, improving vehicle-to-vehicle interactions for increased safety.

Led projects on Cooperative Adaptive Cruise Control (CACC), optimizing driving behaviors and reducing traffic collisions through machine learning algorithms.

Designed and implemented AI-based misbehavior detection systems for autonomous vehicle networks.

KEY PROJECTS

Autonomous Driving Perception Systems

Led the design and deployment of deep learning models for real-time object detection and tracking in self-driving vehicles. Worked on integrating models with sensor fusion techniques involving LIDAR, radar, and cameras.

Neural Network Optimization for Perception Tasks

Developed and tested novel neural network architectures optimized for latency reduction and hardware accelerators, improving performance on resource-constrained autonomous platforms.

V2V Communication Protocols

Contributed to the creation of the SAE J2945/1 standard for V2V communications, enabling safer and more efficient vehicle-to-vehicle communication.

PUBLICATIONS

Detecting and Resolving Feature Envy through Automated Machine Learning, IJECE

Hyperparameter Optimization for Software Bug Prediction, IEEE Access

Speech Recognition Utilizing Deep Learning: A Systematic Review, Human-centric Computing and Information Sciences

iHELP: A Model for Instant Learning of Video Coding in VR/AR Real-Time Applications, Multimedia Tools and Applications

CERTIFICATIONS & TRAINING

Generative AI, Stanford University

Deep Learning, Deeplizard

NS-3 Simulation, Georgia Tech University

CAN Communications, Vector CANtech Inc.

RESEARCH INTERESTS

Autonomous Driving and Robotics: AI for perception, prediction, and motion planning in autonomous systems.

AI in Intelligent Transportation: Development of V2V, V2I communication systems, and integration with perception models for autonomous vehicles.

Cybersecurity for Autonomous Vehicles: Implementing robust security measures in vehicle networks and perception systems to ensure safe operations in connected environments.

REFERENCES

Available upon request.