Hassan Hotait

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Education

Denmark Technical University | Copenhagen, Denmark — **January 2024 - *April 2026***

Msc in Autonomous Systems | GPA: 10 (B+)

• Computer Vision • Deep Learning • Advanced Deep Learning in Computer Vision • Perception For Autonomous Systems • ML Ops
• Visual Experiences • High Performance Computing • Robot Autonomy • Reinforcement Learning & Control • Linear Control Design 2
• Microcontrollers for IoT using embedded C • Safety and Reliability in Automation Systems

HAN University Of Applied Sciences | Arnhem, Netherlands — **September 2019 - June 2023**

Bsc in Automotive Engineering | GPA: 8.3/10

• Specialization in Vehicle Electronics & Control | MATLAB SIMULINK, Model Based Design, Mathematical Modeling, PCB Design
• Minors: Embedded Vision & Machine Learning, Mobile Robotics | C/C++, STM32CUBE, ROS, Pytorch, Tensorflow, Keras, SciPy

Professional Experience

Infineon Technologies | Munich, Germany — **June 2025 - *May 2026***

Deep Learning Engineer (Msc Thesis) - 3D Object Detection | Python, PyTorch, MLOps, HPC

• Developed 3D object detection pipelines in PyTorch integrating camera and radar to improve robustness in harsh weather conditions.
• Enhanced sparse and noisy radar point clouds with diffusion models to achieve 50% IoU alignment with LiDAR BEV ground truth.
• Optimized training scalability using Pytorch across 8 GPUs and efficient data loading on HPC clusters, reducing training time by 30%.
• Applied MLOps best practices: modular codebase design, experiment versioning (W&B, Tensorboard logging), automated evaluation pipelines, reproducible training setups across HPC nodes while conducting large scale ablation studies on sensor fusion strategies.

AgriRobot | Copenhagen, Denmark — **January 2025 - *May 2025***

Robotics Engineer (Part-Time) - Simulation Specialist | C++, ROS, Gazebo, RVIZ

• Developed and maintained robot simulation environments for autonomous agricultural vehicles using Blender, ROS2, Gazebo and RVIZ.
• Configured and validated camera, LiDAR, radar and IMU sensors (intrinsics, extrinsics, distortion models) to support perception&navigation.

Demant | Copenhagen, Denmark — **August 2024 - December 2024**

Production Test Engineer (Part-Time) - Hearing Aids

• Developed automated testing scripts in Python for quality assurance of batches of hearing aids reducing test time by 3 folds.

Siemens DISW | Helmond, Netherlands — **September 2022 - *September 2024***

Sensing & Perception Engineer (Bsc Thesis + Part-Time) - PyTorch, MATLAB, Digital Twins

• Designed and implemented a data generation pipeline in SimCenter Prescan (Digital Twin) capable of producing synthetic labeled datasets in KITTI format for self- driving perception models, scalable to an infinite variety of scenes to accelerate training and validation workflows.
• Published a digital-twin based framework for assessing robustness of object detectors to parametric uncertainties at DSC2023.
• Published a survey on state-of-the-art depth estimation methods and their applicability in intelligent transport systems at CINTI2025.

Projects

Cooperative Agricultural Robotics at ERF | C++, ROS2, DOCKER, Gazebo, RVIZ — **February 2022 - *July 2022***

• Implemented and tested path following algorithm (Model Predictive Control [MPC]) for multi-agent systems in simulation environment.
• Designed and documented a Docker-based containerized ROS development environment for cooperative robotics emphasizing reproducibility, maintainability and software best practices enabling less experienced team members to easily setup and use the platform.
• Prepared live demos at the European Robotics Forum for presentation at the exhibition booth engaging industry and academic partners.

Autonomous Driving | ROS, NVIDIA Jetson — **September 2021 - *December 2021***

• Integrated NVIDIA DriveOS perception pipeline with ROS on test vehicle allowing communication between perception and control module.
• Deployed and validated object detection algorithms on embedded GPU edge-device for real-time perception achieving 50 FPS.
• Collaborated with video editor to plan, script and produce a project demo for stakeholders highlighting key system functionalities

Formula Student Netherlands — **September 2020 - *June 2021***

• Lead the electronics department at FSN, coordinating a multidisciplinary team responsible for vehicle electrical systems and sensor integration while collaborating with the powertrain department to perform system testing and preparation for the competition.
• Developed and validated the throttle control system and ensured full rule compliance of the vehicle's wiring harness and safety circuits.

Skills

• | C | C++ | Python | MATLAB/Simulink | Model Based Design | OOP | STM32Cube | Unity AR | Blender | ROS | Linux OS | NVIDIA Jetson |
• | PyTorch | Tensorflow | MLOps | Unit Testing | CI/CD | Git | Docker | GCP | OpenCV | SLAM | Sensor Fusion | CUDA | 3D Perception |

Languages

English | Danish | Arabic | French

References

Infineon Technologies: huawei.sun@infineon.com | Siemens DISW: alexandru.forrai@siemens.com | DTU: evanb@dtu.dk