

YOHAN LE GARS

Looking for an internship in Computer Vision and/or Machine Learning

Profile

French student with an international mindset who is strongly motivated in becoming a competent engineer in computer vision & AI.

Skills

- ✓ Python (PyTorch, Tensorflow, NumPy)
- ✓ Deep Learning and Machine Learning
- ✓ Computer Vision
- ✓ Simultaneous Localization and Mapping
- ✓ C++
- ✓ Matlab
- ✓ ROS
- ✓ Linux
- ✓ French, English

Contact

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🌐 Yohan Le Gars

Experience

Aug 2020 - Nov 2020

Forvia

PLC Programmer, Gorzów Wielkopolski (PL)
LAD programming (TIA Portal) + HMI with Siemens and Universal robots for a manufacturing station inside the plant.

Education

2021 - Present

MSc Robotics

TU Delft, Delft (NL)

The MSc Robotics is situated at the intersection of mechanical engineering and artificial intelligence.

Minor : Computer Vision & Deep Learning

2016 - 2021

BSc Advanced Technology

University of Twente , Enschede (NL)

General Engineering

Mechanics, Thermodynamics, Fluid Mechanics, Dynamics, Electronics, Fields & Waves, Control theory.

For each discipline a challenging project work is required.

2014 - 2016

High school - French Baccalauréat

Lycée Français Victor Hugo, Frankfurt (DE)

Additional activities

⚡ Sport & Fitness enthusiast

⚡ Computer vision blogger and AI online competitions

Projects

2022

3D HEAD RECONSTRUCTION

TU Delft

- Reproducibility project from scratch of a deep learning paper: H3D-Net: Few-Shot High-Fidelity 3D Head Reconstruction.

2022

PEDESTRIAN RECOGNITION & LOCALIZATION

TU Delft

- Developed a machine learning algorithm to detect and localize pedestrians in 3D using monocular camera sensor and ground plane assumptions.
- Improved the algorithm using LiDAR point clouds, clustered using DBSCAN, for regions proposals.

2022

PATH PLANNING & TRAJECTORY SMOOTHING

TU Delft

- Developed Informed RRT and RRT* from scratch for a mobile robot.
- Applied cubic spline interpolation to obtain a smooth trajectory between the waypoints

2021

OBSTACLE AVOIDANCE & PEDESTRIAN DETECTION FOR A SELF-DRIVING CAR

TU Delft

- Developed a collection of ROS nodes, each tackling a different task, to achieve autonomous driving in a simulated test track.
- Designed two nodes to detect obstacles and pedestrians from the camera images and lidar point clouds using OpenCV and PCL.
- Developed a node that used these detections to generate control instructions.

2021

ARTIFICIAL NEURAL NETWORK FOR A RACING GAME

TU Delft

- Developed and trained a Neural Network for multi-class classification that used the top-view of a 2D racing game as input and outputted the control action (accelerate, steer, left/right, brake)

2021

BACHELOR THESIS: INFLUENCE OF BOVINE SPERMATOZOA BUNDLING ON FLAGELLAR WAVE PROPAGATION

Surgical Robotics Laboratory, Twente

- Mathematical analysis of flagellar wave propagation of bovine sperm cells from two videoscopies for soft robotics application.

2021

CONTROL SEGWAY

University of Twente

- Modelled the dynamics of a segway as an inverted pendulum using 20-sim and bond graphs theories.
- Developed a LQR state feedback controller.

2020

ANTENNA AND FM TRANSMITTER

University of Twente

- Developed a FM transmitter Colpritts harmonic oscillator circuit.
- Developed a helical antenna with 43 MHz resonant frequency. In the initial stages, an analytical and numerical description is performed using COMSOL.

2019

A ROBOTIC ARM THAT CUTS CAKES

University of Twente

- Developed a robotic arm powered by 2 DC motors. EMG signals from the upper limb's muscles are used as the control interface between the user and the robot. The robot is designed for people suffering from Duchenne muscular dystrophy