Nicky Embrechts

Student

DIGITAL INNOVATION PROJECTS (SCHOOL)

Robo Soccer

- Contributed to a team project that developed an autonomous robot soccer system.
- Created a reinforcement learning training environment using Python, Stable Baseline 3, OpenAI Gym, Pygame, and Pymunk.
- Developed a Python framework based on OpenCV to extract the coordinates of the robots and ball from an incoming video stream.
- Showcased skills in computer vision, software integration, and deployment.
- Contributed to a three-month project that was completed by a team of four students.

DeepFake Detection

- Created deepfake detection software using Python and machine learning.
- Developed the prediction model, video processing software, and web interface.
- Demonstrated expertise in Python programming and software development.
- Completed the project as a solo effort within six months, including prototyping, testing, and final demonstrations.
- Participated in a school innovation competition and presented the DeepFake Detection software.

People counter

- Designed and implemented a student counting system using a Raspberry Pi and camera setup in a school classroom.
- Utilized YOLOv5 as an object detection model to accurately count the number of students in the classroom.

WORK EXPERIENCE

Repairer

FixmijniPhone | Belgium - Westmalle JUN 2019 - NOW

I am the owner and sole operator of a student-run business that repairs consumer electronics, including smartphones, tablets, and other devices. With my technical expertise and customer-focused approach, I provide high-quality repair services and have honed valuable skills in entrepreneurship, customer service, and business management.

Research Intern

Holon Institute of Technology | Israel - Holon MAR 2023 - MAY 2023

Engaged in an individual research project utilizing advanced computer vision tools for behavior analysis and pose estimations in detecting autism spectrum disorder in mice, gaining valuable hands-on experience in scientific research and applying computer vision techniques in biomedical research. Leveraging state-of-the-art methodologies, acquired comprehensive understanding of studying autism spectrum disorder in mice and developed skills in data analysis.

Junior Technical Cunsultant

VanRoey | Belgium - Turnhout JUL 2022 - AUG 2022

Gained hands-on experience working as a technical consultant at VanRoey for 6 weeks. Focused on an internal project, honed skills in using Microsoft Dynamics 365 platform and Power tools such as Power Apps. Acquired a deeper understanding of how to work in a corporate setting and collaborated effectively with team members to complete projects successfully.

CONTACTS

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ABOUT ME

As a student of Applied Informatics at Thomas More Geel, I am deeply passionate about computer vision and reinforcement learning. My goal is to use my expertise in these fields to solve complex problems and create innovative solutions. I am always seeking new challenges and ways to improve, whether it's coding challenging algorithms or exploring the latest advancements in computer hardware. I am dedicated and eager to bring my passion to the industry.

EDUCATION

2020 - NOW

Bachelor Applied Computer Sciences

Thomas More Geel | College

2014 - 2020

Electrical Techniques

VTI Zandhoven | High school

SKILLS

- Python
- Machine Learning, Computer Vision
- TensorFlow, PyTorch, OpenCV
- Linux
- IoT and hardware tinkering
- Work independently

OTHER

- Fluent in English and Dutch
- Possess a valid Class B driver's license