



MICHAEL VANDERSTUYFT

+32 479 312 454
info@synaptivision.com
Tienen, Belgium
synaptivision.com

Freelance
Computer Vision & AI engineer

EDUCATION

MSc in Computer Science AI & Graphics Specialization
KU Leuven, 2017 - 2019

BSc in Computer Science Minor in Business & Innovation
KU Leuven, 2014 - 2017

TECHNICAL SKILLS

Programming languages

Python (preferred language)
CUDA (many custom kernels)
C++ (limited experience)
MATLAB (limited experience)

Machine Learning

PyTorch, TensorFlow, Caffe,
TensorRT, ONNX, SciPy, NumPy

Computer Vision

Hyperspectral Imaging
Anomaly Detection,
Segmentation
3D Reconstruction

Object Tracking
Classical & Deep Learning
Methods

Computer Graphics

Blender (expert)
Fusion360 (experienced)
Unreal Engine (experienced)
Theory (expert)

Manufacturing (hobby)

3D printing fanatic
Laser cutting & CNC
Woodworking
Automation and sensing

Languages

Dutch (native)
English (fluent)
French (intermediate)

PROFILE

I'm a freelance Computer Vision & AI engineer with over 12 years of experience (6+ professional) delivering 30+ vision-driven solutions across industrial, medical, and embedded domains. Specialized in hyperspectral imaging, real-time AI pipelines, 3D vision, computer graphics, technical modelling, rendering, synthetic data, and custom hardware integration. I am a former technical lead in AI and computer graphics with extensive experience in technical interviewing. Available for freelance collaborations, consulting and technical leadership roles.

WORK EXPERIENCE

Apixa: Technical Lead - AI & Computer Graphics Jul 2019 - Okt 2025

Delivered 30+ advanced state-of-the-art AI and computer vision projects across manufacturing, medical, food processing, robotics, and security. Key achievements include:

- Developed a surgeon grading tool for robotic surgery trainings
- Developed a hyperspectral imaging system to classify products with 95+
- Designed a real-time anomaly detection pipeline for food streams, including foreign object and rodent detection, using lightweight deep learning models
- Built a photorealistic rendering framework in Unreal Engine 5 for textile simulation at both thread and room scale
- Created a multi-camera vision pipeline on embedded hardware (Jetson Nano) for real-time security monitoring
- Automated defect detection in industrial materials using custom tree-based classifiers and deep learning architectures
- Automated detection of structural elements in low-quality warehouse imagery for real-time localization
- Developed a vision-based system to assist crane operators by detecting human presence in hazardous zones
- Built segmentation models for wood flakes and tree branches to optimize industrial chipping processes
- Designed a system to match broken components in a production plant to warehouse inventory using visual and textual features

Inect: AI Engineer Okt 2025 - present

Worked on various AI projects including:

- Detecting cooking actions and potential mistakes in cooking training videos
- Automated horse monitoring in stables
- Automatic matching of job descriptions to salary survey data

More projects can be found at synaptivision.com

AVAILABILITY

Available for freelance opportunities in AI, computer vision, and graphics. I am currently available 4 days per week for client collaborations, consulting, and technical roles, While dedicating one day per week to work on side-projects.