ALEC WAUMANS

Industrial IT



Contact

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LinkedIn

linkedin.com/in/alec-waumans

Languages

French - native

English - B2

Spanish - A1

Licences

Driving: B **Drone: A1/A3**

Interests

Scouting - 10 years
Diving
Photography
Personal IT projects

Portfolio

theworldofkyra.com/business-card

Scan my digital business card

Industrial IT graduate with hands-on experience in software development, computer vision, embedded systems and robotics. I can develop applications, integrate hardware and software, and test and document technical solutions. Seeking a junior role across the IT field, open to any industry.

Experience

R&D Intern | Autonomous Systems & Aviation

CIRA - Italian Aerospace Research Center, Capua, Italy

February - August 2025

Developed Python modules for perception and event prediction, integrating YOLOv8, LiDAR and graph-based scene representations.
Built a Unity 3D aircraft-landing simulator to evaluate the aviation research prototype.
Defined test scenarios, analysed results and documented the work in a first-author IEEE conference paper.

Internship and final-year project: 19/20

Selected Projects

MOOSE UAV | Personal project, 2026
Fine-tuned YOLOX-S for aerial person detection; integrated TensorRT, camera and Matek/MAVLink telemetry on Jetson across nine ROS 2 packages. Documented held-out evaluation and ground tests.

Robotics & electronics | Academic projects
Raspberry Pi / I2C motor control and ultrasonic sensing; ESP32 sensors and web controls; Arduino servo-control prototype for a 3D-printed hand.

Autonomous Car | Hardware prototype
CNN / Flask vision server; Raspberry Pi / I2C control.

Technical Skills

Programming & platforms: Python; C / C++ in Arduino and academic projects; Linux / Ubuntu.

Computer vision: PyTorch, OpenCV, YOLOX-S, ONNX, TensorRT and camera calibration.

Robotics & interfaces: ROS 2, Jetson, Matek, Raspberry Pi, ESP32; UART / I2C, sensors and servos.

Prototyping & tests: oscilloscope, basic schematics, 3D modelling / printing; Git, pytest and rosbag.

Education

Master's studies in Electromechanics
EAFC Uccle | Evening classes | September 2026 - present

Bachelor's degree in Applied Computer Science
HE2B - ESI, Belgium | September 2021 - September 2025
Industrial computing focus | Graduated with distinction

Specialisation Autonomous Vehicle Engineering
Coursera (Università Federico II) | Online Training | 11/2025

Publication

First author | IEEE RoboticCC 2025

A Hybrid Architecture for Scene Understanding and Event Prediction in Aviation

DOI: 10.1109/RoboticCC68732.2025.00023