Axel Vanherle

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Profile

Master's student in Industrial Engineering (Electronics—ICT). I'm a proactive, goal-driven problem-solver who communicates clearly and learns fast. My experience spans scenarios where analytical problem solving and cross-functional collaboration was required. I am looking to get an opportunity to further apply my engineering ability into measurable impact in real-world problem solving scenarios. I look forward to adapting my existing skill set to new situations and integrating within team environments to convey my ideas effectively.

Education

UHasselt & KU Leuven, Bridging Programme to MSc Industrial Engineering (Electronics – ICT) Sept 2024 – Present

- Current weighted average: **74%** | Expected M.Sc. graduation: **June 2027**

Hogeschool PXL, Professional Bachelor (Electronics – ICT) Sept 2021 – June 2024

- Graduated **cum laude** (71%); Entrepreneurship credit contract (PBA Business Management) — **Greatest Distinction (Summa Cum Laude)**

Skills & Technologies

- **Learning agility** — Quickly learn new **technologies and methods**; comfortable operating across fields. Experience in software, embedded/IT, data & infrastructure, and clear presentations/demos.
- **Analytical & quantitative** — Strong foundation in **mathematics, statistics, and mechanics**; applied in R&D, projects, and tutoring. Non-traditional path (arts → engineering) shows fast self-learning and adaptability.
- **Consulting & delivery** — Requirements capture & translation, stakeholder demos, iterative sprints, rapid prototyping, and clear documentation (Scrum certified).
- **Technical toolkit** — Very broad, hands–on exposure with fast ramp–up across stacks.
  - **Programming:** Python, C, C++, Go, Rust, MATLAB, RISCV ASM, VHDL, Bash, OOP, concurrency, memory management.
  - **Data Analytics & Data Science:** Time-series analysis & forecasting, NumPy, data visualization, Matplotlib, Bokeh, seaborn, SQL querying, ETL / data pipeline, data modeling, feature engineering, machine learning (scikit-learn, XGBoost, ...), time-series frameworks (Darts); anomaly detection & time-series monitoring.
  - **Web/Software:** RESTful APIs, HTTP, JSON, WebSockets, API design, API integration, web services, client-server architecture, real-time communication, frontend development, HTML, CSS, JavaScript, AJAX, Bootstrap, backend development, PHP, Qt, QMake
  - **DevOps/Platforms:** Docker, Docker Compose, containerization, Git, GitHub, GitHub Actions, CI/CD pipelines, Linux, Ubuntu, Debian, Windows Server, system administration, virtualization, Proxmox, Hyper-V, Portainer, monitoring, observability, metrics, Prometheus, Grafana, infrastructure automation, IaC
  - **Embedded/Hardware:** Arduino, embedded C/C++, firmware development, UART, I^2C, SPI, PWM, BLE, sensor integration, PCB design, Altium, KiCad, circuit simulation, embedded Linux, RTOS, FreeRTOS, CMake, debugging, test & measurement, oscilloscope

Experience

R&D Intern (NDA), imo-imomec Feb 2024 – June 2024

- Built a Python time-series pipeline and dashboard with statistical anomaly detection; integrated a BLE sensor fleet; co-designed DAQ PCBs and led bring-up across five spins; ran field tests and four stakeholder demos through 14 iterations to a **production-ready proof of concept** within three sprints.

Academic Roles, UHasselt & Hogeschool PXL Sept 2021 – Present

- **Student Representative (both schools):** served on evaluation committees; gathered cohort input; contributions adopted in **10+** curriculum/process improvements.
- **Buddy, Tutor &Support:** mentored new students and delivered more than 100 sessions (1:1 & group) with a 100% pass rate; created on-boarding docs, study docs and organized, led workshops.

Repair Technician, Servilux June 2022 – Sept 2022

- Repaired ∼15 consumer devices/day with ∼100% first-time fix rate; streamlined parts & product tracking, ordering, and organization.

Languages: Dutch (native), English (fluent)