

Nicky Embrechts

Student

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BIOGRAPHY

I am passionate about technology and innovation, constantly seeking opportunities to learn and grow in the field of Computer Science. As a dedicated martial artist with a Black Belt in Karate, I have developed strong discipline and patience. In my free time, I enjoy tinkering with various technologies and exploring ways to apply them creatively.

EDUCATION

- **Master of Science in Applied Sciences and Engineering: Computer Science** | VUB | 2024 - 2027
 - Profile: Artificial Intelligence.
 - Thesis: State Representation Learning for Generalizable Automated Penetration Testing
- **Bridge Program: Computer Science** | Vrije Universiteit Brussel (VUB) | 2023 - 2026
- **Bachelor of Applied Computer Science** | Thomas More University | 2020 - 2023
 - Grade: **Cum Laude**
 - Profile: Digital Innovation
 - Thesis & Internship: Research project on behavior analysis and pose estimation in detecting autism spectrum disorder. Using computer vision and data science techniques in biomedical research.
- **High School** | Vrij Technisch Instituut Zandhoven (VTIZ) | 2014 - 2020
 - Profile: Electrical Installation Techniques
 - Thesis: Automatic industrial can press consisting of servo, air press, PLC and programs, sensors, emergency stop, control buttons, touchscreen, fuse box, etc..

EXPERIENCE

- **Presidium PR** | Ichthus Antwerp (Christian Student Organisation) | Sep 2026 - Present
 - Responsible for internal and external communications, partner relations, event organisation, and coffee bar management.
- **Repair Technician** | iRescue | Jun 2019 - Dec 2025
 - I am the owner and sole operator of a student-run business that repairs consumer electronics, including smartphones, tablets, and other devices.
- **Student Intern** | The IT Garage | Feb 2024 - May 2024
 - Developed an IoT Vertical Garden system, automating plant care through smart water and light distribution.
 - Focused on real-world data aggregation and hardware-software integration.
- **Research Intern** | Holon Institute of Technology | Mar 2023 - May 2023
 - Applied Computer Vision and pose estimation to analyze behavior in biomedical research.
 - Developed automated data analysis pipelines to assist in studying autism spectrum disorders.
- **Technical Consultant Intern** | VanRoey | Jul 2022 - Aug 2022
 - Worked in the Microsoft Dynamics 365 ecosystem and Power Platform.
 - Built internal business solutions using Power Apps to streamline corporate workflows.

PROJECTS

- **Homelab**: I have a passion for technology and enjoy building and maintaining my own home server. This self-hosted project has allowed me to explore various technologies, including Linux, virtualization, NAS, Networking, and Docker. I've implemented a range of services, such as a photo server, backup solutions, NLP tools, streaming service, a gaming server, ... all while leveraging monitoring systems to ensure optimal performance.
- **Digital Innovation**: During my Bachelor, I had the opportunity to collaborate with companies like Algorhythm, Carbon+Alt+Delete, Axxes, ... I have worked on countless projects, but I am particularly proud of my contributions to the following:
 - Deepfake Detection: Developing a system to identify manipulated media.
 - Robo Soccer: Contributing to the development of an autonomous soccer-playing robot.
 - People Counter: Implementing a camera system to monitor classroom occupancy.

AWARDS

- **InfoGroep CTF 2026 winner**: Cybersecurity-competition of the VUB.

OTHER

- Dutch: Native language
- English: IELTS score of 7.0
- Class B driver's license
- Basic first aid certificate (Red Cross)