Kobe Vanhaeren

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EDUCATION

Katholieke Universiteit Leuven   **Sep 2024 – Present**
Master of Artificial Intelligence   *Leuven*
- On track to graduate Magna Cum Laude
- Specialization: Engineering and Computer Science
- Thesis: Pose-Guided Physics-Based Character Controllers for Virtual Environments
    - Conducted in collaboration with One Bonsai, a company specializing in virtual reality solutions
    - Researching force- and torque-driven motion control for avatars using Nvidia IsaacLab for reinforcement learning with neural networks, and UE5's Motion Matching for human-like imitation.

Katholieke Universiteit Leuven   **Sep 2022 – Jun 2024**
Master of Electronics and ICT Engineering Technology   *Leuven*
- Graduated Cum Laude
- Specialization: Software Systems
- Thesis: Impact of Redirected Walking on Human Perception in Multi-User VR
    - Developed and evaluated a hybrid algorithm combining Artificial Potential Fields with Steer-to-Orbit
    - Reduced cybersickness and increased user confidence in VR navigation
- R&D Project: Naval Knockout – Tangible Pirate Boxing Game
    - Developed a 2-player movement-based game using boxing balls and movement pads
    - Integrated sensor fusion (MPU-6050 + Arduino) and implemented real-time input into Unity
    - Invited to showcase the game at the XL Medialab during the Film Festival, where children tested and played the experience

Katholieke Universiteit Leuven   **Sep 2019 – Jun 2023**
Bachelor of Engineering Technology   *Leuven*
- Final Project: Home Automation – Smart Doorbell
    - Designed a connected doorbell system using ESP32, STM8, and NRF24
    - Included camera, solenoid lock, buzzer, light, and burglary deterrent
    - Built Android app with Firebase for real-time video and control

WORK EXPERIENCE

Plantyn   **July 2023**
Technical Assistant – Summer Job   *Antwerp*
- Digitized math and language exercises for a newly developed platform to improve accessibility for teachers

Uitgeverij Averbode   **July 2022**
Customer Service Assistant – Summer Job   *Averbode*
- Handled customer questions and subscription issues via phone and email
- Provided clear and polite support to clients, ensuring fast and accurate responses
- Gained experience in communication, problem-solving, and working in a professional environment

SKILLS

- Languages: Dutch (native), English (highly proficient)
- Programming Languages: C++, C, C#, Python, Java, HTML, CSS, React, …
- Frameworks & Tools: Isaac Lab, PyTorch, TensorFlow, Unreal Engine, Unity