

I am a passionate engineering student that always thrives to discover new things related to ECE and security. I also have a strong incline for education and sharing my love and knowledge to others. I also provide my know-how and expertise in IT as an independent consultant.

EDUCATION

M. Sc. in Electrical Engineering, chip design and electronics

KULeuven

September 2024 - June 2026

Leuven, Belgium

B. Sc. in Engineering, electricity and computer Science

UCLouvain, Electricity (grade : 15.43) Computer Science (grade : 16.83)

September 2021 - June 2024

Louvain-la-Neuve, Belgium

SKILLS

Tools and Languages

Python, C, Verilog & System Verilog (Vivado, Quartus), Cadence, JAVA, Matlab, Simulink, Git, \LaTeX , Bash, Fusion 360, Altium Designer, Chisel

Languages

French (Mother Tongue), English (C1), Dutch (B2)

TECHNICAL EXPERIENCE

INDEPENDENT IT CONSULTANT (Junior Enterprise)

Junior Consulting Louvain

April 2024 - Now

Louvain-la-Neuve, Belgium

- Digital marketing consultant advising small local business.
- Skills: SEO, Odoo suite, Digital Marketing, Google Analytics, Wordpress, ERP

VULNERABILITY ANALYST INTERN

NXP Semiconductors

June 2025 - August 2025

Leuven, Belgium

- Build a low-cost demonstration device of an ElectroMagnetic Fault Injection (EMFI) attack against a TI LAUNCHXL-CC2640R2 board.
- Replicated a researcher's attack against the crypto core. Extended it to target a vulnerability in the bootflow sequence to re-gain JTAG communication.
- Skills: Vulnerability analyst, Python, Chipwhisperer, Side-Channel, 3D printing, Soldering, EMFI, EM

TUTOR

UCLouvain

September 2024 - June 2024

Louvain-la-Neuve, Belgium

- Teaching Signals & Systems and Introduction to Computer Science.
- Tutoring for a class of 30 second year bachelor students and 24 first year bachelor students.
- Skills: Teaching, Python, Signal and Systems theory

PROJECTS

Master thesis - Accelerating LLM Inference using Self-Adaptive Anda Format w/o Calibration

June 2025 - June 2026

- Working on state of the art quantization algorithm and group float arithmetic. Keys towards efficient and affordable on the edge LLM's.

Design of the RSA algorithm on a co-processor using ARM and a FPGA

October 2024 - December 2024

- Implemented the RSA algorithm in C, ARM assembly, and partial implementation on FPGA using *verilog*. Improved the execution speed by over **1000 %** compared to pure C implementation using a co-processor.
- Used state of the art technique to improve speed. *Montgomery multiplication* for efficient multiplication in hardware. Implemented the *Chinese Remainder Theorem* that shows a **25 %** speed improvement compared to a naive approach.
- Improved soft skills such as : *project management, leadership, critical thinking, outside of the box thinking*.

Geolocation and Communication with a Rover on Mars

February 2024 - May 2024

- As part of a team, we built a resilient geolocation system to track a rover on Mars through Zigbee and Ultra Wide Band antennas. Used Kalman filtering to enhance precision by **20 %** and make more accurate guess. Used cumulative sum and down sampling for minimal computing.
- Build a communication system to get information from the robot. Bit error rate was under **1 %** and doubled the throughput using multiplexing.

EXTRACURRICULAR

CyberSecurity Challenge: semi-finalist and finalist of the 2024 and 2025 edition of the CyberSecurity Challenge. A CTF focused on Cybersecurity hosted at the Royal Military Academy.

2024-2025

UCLouvain Down: built a website that monitors the status of UCLouvain's services. Improved my knowledge in web development, digital strategy, database and network.

2024

LIMUN: participated in the biggest European MUN conference in London. Representing the United States at UNEP.

2023-2024