

Tom Magerat

Electromechanical Engineer

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12 February 2001

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EXPERIENCE

Power System Engineer

Brussels

Elia Transmission Belgium

Sep 2025-Present

Real-time operation of the high-voltage power grid, ensuring system stability, frequency control (load-generation balance), voltage regulation, congestion management, and N-1 security compliance.

Prototype Development Engineer

Brussels

BYS

Nov 2025-Present

Developing a physiotherapy training device prototype as part of an early-stage startup project alongside my full-time role. Responsibilities include 3D modelling in Fusion 360, component selection, and motor-control implementation with position measurement using an absolute encoder over SPI communication.

Electrical Engineer

Brussels

Revolta

Feb 2025 – Jun 2025

Market analysis-driven inverter selection, commissioning, and development of a Modbus-based control software for a home battery energy management system.

Teaching assistant

Louvain-la-Neuve

UCLouvain – Polytechnic school of Louvain

2021 – 2024

Supervised exercise sessions in physics, electrical, and mechanical engineering courses, including electronics fundamentals, and supported student projects on the design, prototyping, and testing of basic electrical circuits.

EDUCATION

MSc in International Business

Brussels

KULeuven – Faculty of Economics and Business

Sep 2024 – Sep 2025

Master's thesis on the forecast of economic competitiveness of second life batteries under multiple carbon pricing scenarios.

Magna Cum Laude

BSc and MSc in Electromechanical Engineering

Louvain-la-Neuve

UCLouvain – Polytechnic school of Louvain

Sep 2019 – Sep 2024

Master's thesis: designed, FEM-optimized (COMSOL), built and tested an induction motor and developed its test bench consisting of a Raspberry-Pi-based closed-loop motor control system and a custom-built analog/digital interface circuit.

Cum Laude

Exchange Student

Montreal, Canada

Polytechnique Montréal

Sep 2023 – Jan 2024

AI introduction, Micro-controller project with UART communication protocol.

INVOLVEMENTS

Scout Leader

Bousval

33BW Unité Saint-Barthélémy

Sep 2019 – Jul 2023

Developed leadership, organizational, and motivational skills, mentoring youth through various activities.

Member of student project

Louvain-la-Neuve

Electrokot - Kot Méca

Jan 2022 – Jul 2023

Engaged in student projects focused on electronics repair and bicycle mobility, promoting hands-on skills in repair and mechanics.

Technical project

Genappe

Designed and built a solar energy production and storage system, integrating photovoltaic panels, power electronics, and battery management system to be self-sufficient in electricity during scout camp.

TECHNICAL SKILLS

Python / Matlab / Java / C

Fusion360

LTSpice

Comsol Multiphysics FEM

Modbus protocol

Programming Raspberry Pi

Programming Micro-controller

Designing Electrical Circuits

Video editing: Davinci resolve

Microsoft Office suite

Financial accounting

PERSONNALITY

Teamwork oriented

Leadership

Target Driven

Analytical Mind

Knowledge Sharer

LANGUAGES

French Native

English : C1

Dutch : B2