NHAT HA PHAM

Electrical Engineering | Automation, Electrical & Embedded Electronics

nhathapa070805@gmail.com | +31 617784693 | Enschede, NL | nh-pham | Portfolio



PROFILE

Electrical Engineering student at Saxion University of Applied Sciences with hands-on experience in Industrial Automation, EtherCAT, Control Systems, Electrical Modelling, PCB design, and Power Electronics.

Completed the first two study years **Cum Laude** with average grades of **8.7** and **8.6**. Seeking a **February 2027** graduation internship where electrical and software engineering meet.

TECHNICAL SKILLS

Programming & Protocols

C/C++ | Python | EtherCAT | Modbus | OPC UA

Industrial Automation

PLC Programming | HMI/SCADA Design | Motion Control | Robot Programming

Electronics & Power

PCB Design | Power Electronics | Power Systems | Machines & Drives | Electromagnetic Compatibility

Control & Modeling

Control Systems | Functional Mock-up Unit | Renewable Energy Modeling

TOOLS & SOFTWARE

Automation

CODESYS | Beckhoff TwinCAT | Ignition | RobotStudio | EPLAN

Electronics & Modeling

Altium Designer | EasyEDA | MATLAB/Simulink | LTspice | Vision Networks analysis

Development

Git | Visual Studio Code

SOFT SKILLS

Team Leadership | Teaching | Technical Communication | Research | Presentation | Technical Writing

HONORS & AWARDS

Saxion Excellence Scholarship

2023–2027

LANGUAGES

English ●●●●○

Vietnamese (Native) ●●●●●

Dutch (A1) ●○○○○

EDUCATION

B.Sc. Electrical Engineering

2023–2027

Saxion University of Applied Sciences — Enschede, NL

- Completed first year **Cum Laude** with an average grade of **8.7**; second year **Cum Laude** with an average grade of **8.6**.
- Relevant areas: Industrial Automation, Control Systems, Power Systems, Embedded Electronics, Machines & Drives, Power Electronics, EMC and Renewable Energy Systems.

EXPERIENCE

Software Engineer Intern

Feb 2026–Jul 2026

Demcon High-tech Systems — Enschede, NL

- Researched, designed and developed **EtherDOG**, a C/C++ platform for simulating configurable **EtherCAT devices and networks**.
- Integrated **KickCAT** with **FMI/FMU models** to provide configurable system behaviour, including PDO-to-FMU variable mapping.
- Implemented and tested **multi-device EtherCAT simulation**, configuration handling and a supporting Python GUI.

Teaching Assistant - PLC Programming

2025

Saxion University of Applied Sciences — Enschede, NL

- Assisted students with **PLC programming in CODESYS** during practical sessions.
- Provided one-to-one technical guidance and supported assessment by grading assignments.

SELECTED PROJECTS

Automated Gantry Crane

2025

Team Leader - Project EEET

- Led a student team tasked with automating a gantry crane using **CODESYS** and **Ignition**.
- Implemented **motion control for all crane axes** and contributed to PLC/HMI functionality while coordinating the team.

Industrial Integration - LEGO Assembly

2025

ABB Robotics & Cognex Machine Vision

- Integrated a **Cognex vision system** to detect and sort LEGO pieces, providing positioning information for robotic handling.
- Programmed an **ABB robot arm** to pick and transport a 3D-printed plate to the next robot station in the assembly process.

Active Noise Cancellation Headphones

2024

Power Management - Project Simulation & Realization

- Owned the battery and power-management for a wireless active-noise-cancellation headphone prototype.
- Managed the power subsystem to target at least **5 hours of operation**; designed a charging PCB and buck/boost converter.

References

Name: Ivan Garcia Borràs
Lecturer Electrical Engineering & Applied Computer Science | Saxion University of Applied Sciences
Email: i.garciaborras@saxion.nl