

Francesco Salvatore

Mechanical Engineering student passionate about subsea robotics & energy systems. Hands-on experience building robots, modelling heat-storage batteries, and deploying PLC-based automation in live production environments.

Eindhoven, Netherlands

(+39) 377 375 3088

francisalv@icloud.com

[Linkedin](#) [Github](#)

francescosalvatore.com

EXPERIENCE

Kellogg's, Belgium— Automation engineer intern

Jun 2025 - Jul 2025

- Developed a diagnostics tool in Studio 5000 for 36 Device-Level-Ring (DLR) circuits, cutting troubleshooting time by 20×.
- Linked PLC data to HMI screens via parameter-files in FactoryTalk View SE.
- Tested Allen-Bradley PLCs and VFDs, tracing signals through plant networks (EtherNet/IP, DLR).
- Partnered with E&I engineers on OT-cyber-security and process-automation improvements.

EDUCATION

Technical University Eindhoven TU/e — BSc Mechanical Engineering

2024-2027

PROJECTS

Stair climbing robot (competition)

- Designed & built a robot able to climb stairs up to 50° and complete an obstacle course.
- Programmed embedded control in Arduino C++ with real-time sensor-feedback PID stability loop.
- Fabricated lightweight structure via 3-D printing, laser-cutting, and Siemens NX CAE (Nastran/Motion) simulation to optimise strength-to-weight.
- Designed full electrical circuit including motor-driver & sensor interfaces.

Heat-Energy Storage Simulation

- Modelled a wind-powered thermal-battery using MATLAB & Simulink, from surplus-wind-input to variable-demand output.
- Optimised energy-retention by simulating porous volcanic-rock (basalt) heat-storage medium and aerogel-style insulation.
- Produced efficiency and temperature-decay curves for energy-system feasibility study. Model had 62% efficiency

DLR-Network Diagnostics Tool

- Built an industrial-network fault-detection pipeline for Device-Level-Ring circuits at Pringles factory.
- Enabled root-cause localisation in seconds, boosting production-line uptime and easing troubleshooting for E&I team.

SKILLS

Robotics ROS2, Rviz, Gazebo, Git, Arduino, Matlab

Energy & Simulation:

MATLAB/Simulink (system & thermal models)

Industrial Automation

Allen-Bradley / Rockwell Studio 5000, FactoryTalk View SE

3-D Design & CAD:

SolidWorks, Onshape, Siemens NX Simcenter, Bambu Lab A1 (FFF printing)

Programming & Scripting

(Python for data/signal processing, C++, javascript)

Industrial Networking & Protocols (EtherNet/IP)

AWARDS

Student collaborator of the year 2x

Cultural student of the year

National Certificate of excellence (DCG)

Gaisce Bronze award (2021)

Certifications

First Aid Qualified (2022)

Barista certified (2021)

Rewrite Sustainability (2021)

LANGUAGES

Italian | Native

Dutch | Native

English | Fluent

Spanish | C2