**Johan Philis**
Engineering Mathematics

Gothenburg
+46703093070
johan.e.philis@gmail.com
LinkedIn

About me

Studied programming and mathematics with a strong passion for computing, machine learning, and algorithmic problem-solving. Enthusiastic about developing innovative software solutions and continuously exploring new technologies and tools. Thrive in collaborative environments that bring together diverse technical expertise.

Skills

Python   C   Zig   Rust

C++   SQL   Git   Linux

CI/CD   Docker   MQTT
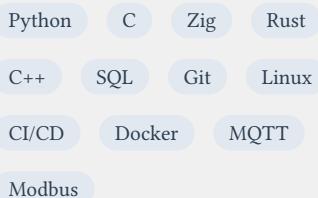
Modbus

Work Experience

Software Developer
Checkwatt   2025−2026

As a member of the embedded development team, I focused on improving the handling of MQTT connections and integrating inverters using the Modbus protocol.
- Developed a MQTT connection pool handler with TCP and message timeouts using a round-robin strategy.
- Integrated new inverters using Python and Modbus.

Keywords: Linux, RaspberryPi, MQTT, Modbus, TCP, OOP, Embedded

Software Developer
Micropower   2022−2024

Developed an integration test framework to simplify the testing of their modular Li-ion battery system.
- Developed a library in Python for integration tests.
- Developed tests in Pytest.
- Developed CI/CD pipelines in Bitbucket.
- Built an automation rig for integration with hardware.

Keywords: CI/CD, Docker, Linux, RaspberryPi, Arduino, HIL, Automation, Electronics, Microcontroller

Software Developer - "Tekniksprånget"
Ericsson   2019

Developed automated irrigation using Raspberry Pi in greenhouses at Ericsson.

Education

Engineering Mathematics (5-year engineering degree)
Chalmers University of Technology   2020−2025
- **M.Sc in Complex Adaptive Systems (CAS).**
- **Master Thesis:** Synthetic data generation for Driver Monitoring Systems at **Zenseact** and building from-scratch deep learning models for validating AD/ADAS systems.
- **B.Sc in Engineering Mathematics (ENM)**.
- **Bachelor Thesis:** Machine learning for nuclear physics experiments at CERN.

Highlighted Courses

- High performance computing
- Neuro-Symbolic AI
- Structured machine learning
- Advanced machine learning
- Statistical learning
- Artificial neural networks
- ML Algorithms & Inference
- Advanced Python
- Data structures & algorithms
- Databases
- Probability and statistics
- Bayesian inference
- Stochastic data processing
- Stochastic optimization
- Nonlinear optimization