Janosch Jungo

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Zurich, Switzerland
LinkedIn
GitHub
Personal website

Date of birth
27.01.1998

Nationality
Switzerland

Hobbies
Freediving Tennis Martial Arts

Skills

Programming
Python R C++ Matlab Simulink HTML/CSS

Machine Learning
PyTorch TensorFlow Keras OpenCV Scikit-Learn SciPy

Optimization
Pyomo Gurobi JAX cyIPOPT

Data Management
Git Pandas SQL NumPy Docker

Data Visualization
Plotly Dash Matplotlib Tableau Seaborn PyQt

Soft Skills
Reliable Independent Creative Teamwork Curious

Languages

German	Native
English	Fluent
French, Spanish	Intermediate
Japanese, Russian	Beginner

Education

ETH Zurich
2021 - 2023
Master of Science
Electrical Engineering and Information Technology
Major: Signal Processing and Machine Learning
(Grade: 5.36/6.0)

ETH Zurich
2017 - 2021
Bachelor of Science
Electrical Engineering and Information Technology

ETH Zurich
2016 - 2017
Bachelor of Science
Biology - First year (passed)

Experience

Rheinmetall
Apr 2025 - Now
Data Scientist
- Built a data analysis software that automates the processing and evaluation of multi-sensor data (radar, laser, GPS) that is deployed extensively in field tests and was sold to an external customer.
- Analyzed real-world performance of radar and optical trackers and wrote detailed technical reports for internal teams and international customers.
- Integrated high-accuracy time synchronization into a real-time machine using satellite communication.

Hochschule Luzern (DEEP Lab)
Mar 2026 - May 2026,
Jan 2025 - Apr 2025
Civil Service - Research Engineer
- Developed a reinforcement learning-based trading agent for electricity markets to aid power grid control and compared it to optimization-based methods.
- Built optimization models of energy systems and battery aging simulations for facilities with EV fleets to support infrastructure planning.
- Built time-series transformer-based forecasters to predict electrical demand using weather data.

Rheinmetall
Jun 2024 - Dec 2024
Engineering Intern
- Developed a software application (frontend/backend) to record hit patterns that is widely used during test campaigns and was successfully sold to a customer.
- Built a data logger that records and encrypts critical system data during engagements for fault detection.

Hitachi Energy
May 2023 - Oct 2023
Research Intern
- Designed a hybrid control architecture for safe and economic power grid automation, based on optimal control, machine learning, and reinforcement learning models as part of my master thesis.

Personal Projects

Blackjack AI
Combined deep reinforcement learning and card counting to develop an algorithm that outperforms humans in blackjack.

Chess AI
Built a planning algorithm using MCTS in C++ and Python that plays chess autonomously.

Coding a Neural Network from Scratch
Programmed a multi-layer perceptron with functioning backpropagation without using external libraries.

References

Severin Nowak
Lecturer
Hochschule Luzern
severin.nowak@hslu.ch

Jan Poland
Senior Prinicipal Scientist
Hitachi Energy
jan.poland@hitachienergy.com

Shkurta Gashi
Data Scientist
IKEA (ex ETH AI Center)
gshkurta@gmail.com

ETH Zurich
May 2021 - Oct 2021

Research Assistant - Power Systems Laboratory
- Provided illustrations of electric circuits and technical drawings for the lecture.

ETH Zurich
Sep 2020 - Dec 2020

Lab Assistant - Automated Control Laboratory
- Coordinated and assisted students in control systems theory and practice during their laboratory work.

Theses

ETH Zurich, Hitachi Energy
Automated Control Laboratory

Master Thesis
Designed a hybrid control architecture for safe and economic power grid automation, using a machine learning-based blackout forecaster to selectively activate a model-based optimal controller and a reinforcement learning-based emergency agent.

ETH AI Center
Sensing, Interaction & Perception Lab

Semester Thesis
Developed a masked self-supervised transformer model for missing data imputation on wearable data and evaluated its performance against common benchmarks and on downstream CNN-based fatigue classification via an end-to-end pipeline.

ETH Zurich, AMZ Racing
High Voltage Laboratory

Semester Thesis
Developed a hardware-in-the-loop PCB to test the performance of drivetrain components, including a three-phase high-voltage measurement circuit, a high-voltage safety circuit, and a communication interface to read signals from the race car.

Publications

Deep Learning-Based Missing Data Imputation - AAAI
Jungo et al. „Representation Learning for Wearable-Based Applications in the Case of Missing Data," in Human-Centric Representation Learning Workshop at AAAI 2024.

Hybrid Power Grid Automation - Hitachi AI Conference
Jungo and Poland. "Learning Load Management for Transmission Line Overload Control," in 5th Hitachi AI Conference 2024

Reinforcement Learning in Electricity Markets - *In preparation*
Jungo et al. "Reinforcement learning-based bidding strategy for local flexibility markets"