# Wenyu LIU

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## 🎓 Education

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| Present<br>09.2023 | Master in Energy Science and Technology, **École Polytechnique Fédérale de Lausanne**<br>Section of Electrical and Electronical Engineering      GPA: 5.5/6.0 |
| 06.2023<br>09.2019 | Bachelor in Energy Storage Science and Engineering, **Xi'an Jiaotong University**<br>Faculty of Electronic and Information Engineering      GPA: 91.16/100 |

## 💼 Work Experience

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| Present<br>02.2025 | Market Innovation Internship (100%) @ Hitachi Energy<br>❯ To be updated soon. |
| 09.2024<br>07.2024 | Summer Internship in Charging System (100%) @ SAIC Motor<br>❯ Performed state-of-the-art review of on-board chargers, conducted a feasibility study on the vertical integration of on-board chargers.<br>❯ Designed control systems and simulation models for a $6.6\,kW/400\,V$ totem-pole bridge-less PFC converter and LLC resonant converter demo. |
| 09.2022<br>03.2022 | Internship in Energy Storage Market (40%) @ China Energy Storage Alliance (CNESA)<br>❯ Maintained and updated CNESA's energy storage project, policy and bidding information databases .<br>❯ Collected energy storage news articles; edited drafts of research reports and compiled quarterly global energy storage market tracking report. |

## 🔧 Sills & Languages

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| **Relevant Skills** | Convex optimization, Power system analysis (pandapower, PyPSA), Smart grid technologies (monitoring, forecasting, optimal power flow) , Energy system modelling |
| **Other Skills** | Control design (PID and model predictive control), Data analysis, Git for version control, LaTeX, Life cycle assessment, LTSpice, MS Office, PLECS, System identification |
| **Coding** | Python, MATLAB & Simulink, C/C++, LabVIEW |
| **Language** | **Chinese** — Native      **English** — C1      **Français** — A2 |

## </> Projects

❯ SP at DESL: A Framework for Carbon Flow Tracing in Swiss Power Distribution Grids (Ongoing): Upgraded a primitive framework for carbon footprint tracing from inferred Swiss low-voltage to medium-voltage grids. Expanded the capabilities of the framework by upgrading naive generation models by integrating geographical and meteorological information data on roof suitability (for PV modelling).

❯ SP at DESL: Li-Ion Cell Equivalent Circuit Model Parameters Estimation from Time-Domain Measurements: Utilized voltage and current signals sampled by battery management system for estimating the parameters of battery equivalent circuit models. Explored the identifiability of different parameters and developed a low-frequency model for estimating constant phase element via grey-box estimation.

❯ The Impact of COVID-19 on Green Energy Transition in European Countries: Delved into the interplay between the COVID-19 and renewable transition in 6 EU countries, analyzed datasets on generation, interests, mobility and government intervention, uncovered how the pandemic impacted electricity generation, consumption, and awareness of renewable energy.