Lynrick Wix, MSc.

Email: lynrickwix@gmail.com
LinkedIn: lynrick-wix
Phone Number: +31 6 24197559
Delft, Zuid Holland

EXPERIENCE

- **Tesla (2021 - 2022) - Project Engineer Intern** *(Communication, AutoCAD, Modbus, BESS design/commissioning)*
  1. I was part of the project engineering team for the deployment of Tesla's energy products. I provided multiple site layouts and single line diagrams for tender projects for different clients and commissioned a battery storage site for a *client*.
  2. Made testplans and performed tests on several energy storage sites (*Holes Bay and Contego BESS*) and test benches in order to comply with G99 grid code requirements and frequency regulation market requirements.

- **Lightyear (2021) - Cell Test Engineer Intern** *(Matlab, Battery cell/pack testing/research, Data acquisition/processing)*
  1. Built the battery cell test setup from the ground up and developed a Matlab graphical user interface in such a way to reduce the amount of manual steps from the start of the test to extraction of valuable data from the tested battery cell. Furthermore, multiple characterization tests and scripts were set up by myself for any engineer or technician to make use of for years to come.
  2. Developed an algorithm for calculating the internal resistances and capacitance of battery cells (RRC model) using DCR pulses instead of the costly EIS measurements. Error of the simulated voltage response versus measurements was max 1.15%.

- **Delft Hyperloop (2019 - 2020) - Powertrain and Test Engineer** *(Matlab, Teamwork, Battery pack design/assembly, Battery cell/pack testing/research, CAN)*
  1. Responsibilities were to head every tests within the department and the implementation of the battery management system for the battery pack. Furthermore, I also co-produced the wiring warness and co-automated a flywheel setup with multiple measurement devices.
  2. Coordinated and built an 800A load test setup to verify manufacturer's datasheet claims. This ensured that a lightweight battery pack was produced, which resulted in a battery pack weight reduction of 40% compared to the previous team.

PROJECTS

- **Stedin (2023) - Thesis** (*Python, Matlab, Modbus, Test setup design/commissioning, Data acquisition/processing*)
  Investigated the application of supercapacitors or batteries at a residential level to reduce voltage fluctuations caused cloud passing over PV panels. Successfully commissioned two test setups (Grid connected PV system + BESS) of which one I had installed all of the BESS devices by myself. Finally, I made a graphical user interface in Matlab for both test setups which reads and writes messages to all of the devices in the test setup and builds up a data file to be exported after the test for post processing. Results showed that the designed control algorithm minimized the energy usage from the BESS by only consuming around 28Wh.

- **European Hyperloop Week (2021 - 2022) - Technical Juror** *(Communication, Test documentation)*
  I was part of a team of skilled technical jurors for the annual European Hyperloop Week competition. Mainly focused on the electrical subsystem, traction/propulsion subsystem and full pod awards. Furthermore, I scrutineered multiple hyperloop student teams from around the world to ensure safe operation of their pod at the public event.

EDUCATION

- **TU Delft - MSc Electrical Engineering**   Delft
  Specialization in Power Electronics and Electrical Grid
  Electives in Battery Energy Storage Systems and Photovoltaic Systems

- **TU Delft - BSc Electrical Engineering**   Delft
  Minor Spaceflight + IEEE certificate for Best High Tech Start-up Business Plan for Bachelor final project.

PUBLICATIONS

1. **L.R. Wix**, G.R. Mouli, P. Bauer, A.M van Vooren and H. Fidder, "Design and control of an energy storage system for voltage flicker caused by clouds passing over photovoltaic systems", *IEEE Transaction on Sustainable Energy*, **ONGOING**

SKILLS

Communication, Prioritizing, Teamwork, Time management, Microsoft Office/Google docs, Matlab, C, VHDL, PLC (Beckhoff), Python, AutoCAD, PCB design/assembly, Soldering, Battery pack design/assembly, Battery cell/pack testing/research, BESS design/commissioning, Test setup design/commissioning, Data acquisition/processing, Test documentation, COMSOL, Simulink, Altium, KiCAD, EasyEDA, CAN, Modbus, JIRA, Confluence

LANGUAGES

Dutch, English, Spanish, Papiamento