In order to grow together and to take on the challenges of tomorrow, we are looking for you for our location in Ellwangen

**PhD position: Development of a Machine Learning Model based on Electrochemical Impedance Spectroscopy (EIS) for Prediction of Li-ion Cell Quality (f/m/x)**

**We are empowering independence.**
For our customers through our battery technologies. Our employees benefit from more perspective. As a traditional company, VARTA offers you a secure job in a strong community. And as a technology-leading global brand, VARTA gives you creative freedom in exciting projects and tasks in the future market of innovative energy solutions.

**Your tasks**

- Evaluation of different machine learning models and their applicability for EIS-based Li-ion cell quality prediction to find a best fit as a compromise between different technological and economical aspects
- Independent planning, execution, and evaluation of comprehensive empirical long-term cell performance studies for different Li-ion chemistries
- Define by the machine learning model to be predicted Li-ion cell performance parameters
- Training and validation of your elaborated machine learning model towards prediction accuracy
- Working out of an implementation strategy for your findings, as an ongoing quality control mechanism in Li-ion cell mass production

**Your skills**

- Completed engineering degree in electrical or mechanical engineering, mechatronics, physics, or similar
- Basic knowledge of Li-ion cell technologies and cell testing
- Relevant experience in machine learning methods and programming
- Handling of extensive data quantities
- Manufacturing process-oriented approach with focus on implementation
- Proficiency in English (spoken and written), good German skills beneficial
- Delight on interface task (R&D, quality assurance, manufacturing)
- Sociability and structured way of working

**What we offer**

- Direct impact in our product-development processes
- We support your PhD-thesis with an attractive salary
- Flexible working times
- Company restaurant and free water
- Discounts in web stores and with regional cooperation partners
- Sport and fitness offers
- Business Bike
- Industrial selling

The requirement for the employment is the mentoring of the doctoral project by a university professor. The selection of an appropriate mentor is the PhD student's responsibility.

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