

We are looking for a

Bachelor/ Master Project – HV DCDC converter for electric vehicle (f/m/d)

About Munich Electrification

Munich Electrification is an innovative company founded with the aim of accelerating the transition to electric mobility. We develop innovative battery management systems for electric vehicles for our global customers. Our international team is composed of highly motivated, exceptional young engineers. We offer a relaxed and friendly work atmosphere with flat hierarchies. As a small and specialized team, we are well-aware of the importance of each individual colleague and support and promote each employee according to their abilities and needs. Our office with adjacent prototype and testing lab is located in the heart of Munich at the Heimeranplatz.



Your Role

We are looking for a highly motivated Bachelor or Master student to support us in the development of our innovative BMS (battery management systems). You will be responsible for your own prototype development project in hardware and software with the support of our engineering teams.

Your Responsibilities

- The goal of the project is to develop a proof of concept of a 800V to 12V buck/boost DCDC converter for electric vehicles. The DCDC converter should be novel in the following two aspects: Safe energy availability for autonomous EVs. Furthermore, the DCDC converter shall enable to pre-charge the 800 V DC bus from 12 V.
- The first project milestone is to research requirements and state of the art solutions / topologies for automotive electric vehicle DCDC converters. Pros and Cons of various approaches shall be analyzed. Key factors for efficiency shall be identified and described.
- The second project milestone is to propose a set of requirements for the proof of concept. Novel ideas, such as safe energy availability and DC link precharge capability shall be incorporated. A suitable topology shall be chosen and described.
- The third project milestone is to design and built a proof of concept of the DCDC converter using off-the-shelf components and/or demoboards.
- The final milestone is to perform bring-up testing og the proof of concept DCDC converter in a lab environment

Your Profile

- Bachelor or master student in electrical engineering, mechatronics, physics or similar engineering field
- Good understanding of power electronics, digital and analog circuit design
- Basic programming skills in C/C++, Python, experience with Arduino or similar systems
- Highly motivated, willing to take responsibility and ownership of a project
- Creativity, curiosity and enthusiasm for innovative electronics solutions for electric vehicles
- Preference for working in teams and strong communication skills (English and German mandatory)

Our Offer

- The chance to be part of a highly innovative, agile, and unique team with the most prestigious customers in the automotive sector
- A deeper knowledge around electric vehicle batteries, battery management systems and electronics development
- Healthy lunch and fresh snacks everyday
- An exciting working environment and various inspiring team events

Ready for a new challenge?

We are looking forward to your application!

E-Mail

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Contact Person

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