

- Research, Design & Development

### **Passion-Driven Graduations in Innovation**

### **About AME**

AME is an independent developer and manufacturer of high quality electronic products located in Eindhoven. Our mission is to "Partner with Customers to develop and manufacture tomorrow's products". We create distinctive technical solutions for our customers, based on:

- Focused technology roadmaps, strengthening our IP portfolio and enabling low risk, efficient innovative product development.
- Product innovation programs with high tech industrial partners and Universities, enabling adaptation of leading edge technologies.
- Participation in local and European subsidy programs, accelerating the company knowledge base.



## **About/Why AME RD&D:**

In our department, engineering is not just a profession, it's a passion that drives us. We empower you to explore your engineering dreams, to think differently and be distinctive in your approach.

Imagine a place where innovation and development are not just buzzwords, but the essence of every project. As an intern, you'll be in the midst of groundbreaking work, partnering with our brilliant teams to engineer winning products that make a real impact. You'll experience technology in action, not just in theory.

Custom integrated products are at the heart of what we do. From the very inception of an idea to mass production, you'll engineer unique solutions that meet the complex demands of the industrial and new energy markets. This hands-on experience will elevate your engineering skills to new heights.

> We believe in responsible engineering. You'll learn the importance of maintain product quality and sustainability throughout their lifecycle.

In essence, our department is where your engineering passion meets realworld innovation.

Curious about the possibilities? Reach out to meet and discuss your passion, or apply at career.ame.nu.







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## **Electrical Engineering Graduation Internship**

Join AME for an exciting Electrical Engineering internship:

- Gain hands-on experience on cutting-edge projects.
- Work with experienced mentors.
- Location: Eindhoven.
- Duration: Fall Winter 2024.
- **■** Level: Bachelor / Master.



## **Endless possibilities:**

As a graduation student at AME you can research state-of-the-art technologies, build exploratory proof of concepts of emerging technologies, or solve real world problems.

- Create a fully function prototype of a Vienna Rectifier PFC. Design the hardware, which will be produced in our factory. Design and optimize the control algorithm using Matlab Simulink, and write and test the software on the prototype.
- Be on the forefront of the GaN revolution by designing a standardized high power module. Perform component selection, design the module with focus on thermal management and size. Test and verify the performance of your design on an actual prototype.
- GaN based totem-pole PFC power-stage. Focus on reusability, creating a design optimization framework. Validate your framework on an available prototype.
- Determine the impact of high frequency switching for magnetics. Matrix transformer
- Finalize a 100kW traction drive. Design and test the output and current measurement board and an interface board that interfaces with the controller. Build a prototype of the drive and validate your design and the overall drive performance.
- Creating the **Predictive Maintenance Unit** for motor drive systems with state-of-the art sensors, processing unit and communication interfaces. This electronics unit will be used in different applications to predict system failures/ anomalies using Machine learning techniques as a next step.

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# (Embedded) Software Graduation Internship

Join AME for an exciting Embedded Software internship:

- Gain hands-on experience on cutting-edge projects.
- Work with experienced mentors.
- Location: Eindhoven.
- Duration: Fall Winter 2024.
- **■** Level: Internship / Graduation Bachelor.



## **Endless possibilities:**

As a graduation student at AME you can research state-of-the-art technologies, build exploratory proof of concepts of emerging technologies, or solve real world problems.

- Can you help us in integrating the state-of-the-art AME BSP to a cost-driven alternative. Compare the BSP provided by Renesas with our AME BSP and add support for the Renesas SOC in our BSP.
- Do you want to be responsible for **creating the test framework** that will determine the quality of each BSP delivered by AME for the coming years. Testing the quality of the BSP should be fully automated and provide us an detailed report the next morning on the quality of the BSP.
- Gain hands-on experience with the development of a OCPP (Open Charge Point Protocol) 2.0.1 server and client solution that powers the **EV charging revolution**. OCPP 2.0.1. is the next step in the most commonly used back-end by Charge Point Operators (CPO's) within the EV chargers community including support for more advanced features like PnC (Plug 'n Charge) and V2G (Vehicle-to-Grid).
- Work on a cutting-edge technology with the integration of the location-based service of Apple, Find My, to an E-bike product. Challenges involved are the integration with the Apple eco-system, integration with the existing Bluetooth mobile app interface and the limited power capacity.
- Join us in the sustainable energy solutions and work on further extending our AME AC Charger Platform by integration of more advanced (dynamic) load balancing algorithms. These algorithms run locally on the AC Charger Platform and allow for a set of chargers to share a single energy supply on a charge site which only has a limited capacity available.
- Want to work on the latest technology buzz Generative AI! Join us in making our own ChatBoT using Large Language Models (LLMs).

Reach out to meet and discuss your passion, or apply at <u>career.ame.nu</u>.

