

Thesis: Data Analytics (f/m/div)* Key differentiating feature analysis of the product portfolio.

You are passionate about data analytics and have a desire to make faster and better decisions? At Infineon's Power & Sensor Systems (PSS) division we are looking for a data-savvy team player to leverage data analytics for strategic decision making. Have you already gained first practical experience in tasks such as data extraction, data mining and machine learning and want to get deeper insights into a multinational high-tech company that is a driver of innovation across many industries? Then, a thesis with us is a great opportunity for you! You will have the chance to participate in our PSS division's Center of Competence for Analytics and closely collaborate with and learn from team members. You will gain first-hand experience by contributing to several aspects of a systematic approach to improve market intelligence and trend detection. Are you interested? Then don't hesitate and apply now. We are looking forward to hearing from you.

About PSS at Infineon: Power & Sensor Systems (PSS) drives leading-edge power management, sensing and data transfer capabilities.

Infineon **PSS** semiconductors play a vital role in enabling intelligent power management, smart sensitivity as well as fast and reliable data processing in an increasingly digitalized world. Our leading-edge power devices make chargers, adapters, power tools and lighting systems smarter, smaller, lighter and more energy-efficient. Our trusted sensors increase the context sensitivity of "things" and systems such as HMI, and our RF chips power fast and reliable data communication.

Thesis Topic: Understanding the value proposition of our products and those of our competitors in a dynamic and fast paced market is essential for the development and strategic planning of future products. What are the main "value drivers" that specific products are offering and can you identify a systematic approach to identify these? What role do machine learning and other AI frameworks play?

During your thesis you will:

- Review and summarize related literature
- Develop, test and evaluate **solutions for analytics use cases** from **data collection** and **preprocessing**, including **knowledge extraction** all the way to visualization of insights
- Directly communicate with relevant stakeholders
- Identify and implement relevant AI frameworks
- Contribute to the **strategic product design with systematic approach and analytics**-based approach at our PSS division

You have excellent analytical skills as well as a clear understanding of how data analytics creates value-add in strategic business decisions. With your creative and solution-oriented mindset, you think outside the box and are always eager to try out new concepts and improve. Your self-driven entrepreneurial spirit makes you comfortable with a high degree of freedom while executing tasks. You are enthusiastic, have very good interpersonal, communication and presentation skills and work in a structured and methodical manner.

You are best equipped for this task if you:

- **Study statistics, data science, mathematics, computer science** or a similar field with **excellent results**.
- Already gained **relevant experience in the implementation of machine learning projects** including e.g. data curation, communicating with counterparties, and data visualization
- Are familiar with **theoretical concepts of machine learning** and **data mining**, f.e. which problem can be solved with which **type of algorithm** and what their **limitations** are
- Possess good skills in **analytics software/tools** as well as in **programming languages** such as **Python, R, Jupyter Notebook**
- Have **good communication skills in English**; for foreign applicants, good knowledge of German is a plus

The university supervisor is [Prof. Markus Pauly](#) (Mathematical statistics and industrial applications at TU Dortmund) and the direct supervision is going to be provided by Louis Steinmeister. This opportunity arises through a cooperation between [Infineon](#), the [Graduate School of Logistics](#) of the TU Dortmund and the **thesis will be compensated by Infineon**.

Please email your application entitled **“Thesis Application: Key differentiating feature analysis – [Your Name]”** to Louis Steinmeister (louis.steinmeister@infineon.com) and include the following documents:

- **CV in English**
- **Certificate of enrollment at university**
- **Latest grades transcript**
- **Transcript of Bachelor studies**