Job description

The industrial doctorate at Infineon: Pursue a doctoral degree at a university and gain professional experience simultaneously - an ideal start for your career. Advance your research with us and profit from our vast network of doctoral candidates and the expertise of a university. Mentorship is handled by both professors and dedicated Infineon employees.

We are offering a doctoral thesis dealing with natural language processing related to the FEMA (Failure Mode and Effect Analysis) generator. Infineon owns wide and deep technological knowledge, in order to make this knowledge systematically available for risk management (FMEA), an artificial intelligence based tool has to be created. The novel systems should be able to combine various knowledge representations (text or speech based sources) and reasoning techniques with machine learning approaches to process, store, retrieve, navigate, and recommend the information when it is required by teams of engineers.

In your new role you will:

- **Work in connection with semiconductor experts** to design knowledge bases formalizing their knowledge about the manufacturing process
- **Apply machine learning methods** to extract knowledge from different data sources (text documents, spoken language)
- **Develop AI based methods** to link root causes and failure effects in semiconductor environment and make them accessible to a human interface
- **Use these AI techniques** to apply for the generation and improvement of documents for risk management (FMEA)
- **Work in the international context** of an European project with international partners

We welcome you to join our international team of experts and contribute to novel AI solutions for industry digitalization!

Profile

You are best equipped for this task if you have:

- A **master degree** in the area of **informatics** or equivalent
- **Programming** skills in **Python, R, C#**
- Skills in **knowledge representation** and **reasoning** (Ontologies, Description logic)
- **Query languages** (SPARQL)
- Experience with **machine learning** and **NLP** is a plus
- Understanding of **principles of recommender systems** and **human-computer iteration**
- **Excellent knowledge** of **English** language (German is a plus)

The application should include:

- Your CV
• Motivation letter
• Copy of your master degree certificate if already available
• Otherwise: copy of your latest study transcript

This position is subject to the collective agreement for workers and employees in the electrical and electronics industry. The salary for this position is EUR 2,760.00 gross p. m. (full-time basis).