Fraunhofer IPA at Stuttgart is looking for a

**Research Student Assistant / Internship**

Self-optimization of Production Machines using Big Data Technologies for real time data processing and visualization

**Fraunhofer is the largest research organization for applied research in Europe. With nearly 1 000 employees, Fraunhofer IPA is one of the largest institutes in the Fraunhofer-Gesellschaft. It has an annual budget of over 70 million euros, with more than one third coming from industrial projects.**

With our innovative production optimization services, we help manufacturing companies pursue their core factory goals. Our services range from a temporary optimization of current operations to permanently integrated self-optimization tools for complete production lines. Our research and development contributes to more effective and more efficient factories of the future.

**Starting time:** Anytime

**Subject of Study:** Information management / computer science / Data Science

**General Topic:**
“Smart optimization of interlinked manufacturing systems” is a project of Fraunhofer IPA at Stuttgart targeting the automation of process optimization in interlinked process chains in high volume production systems. The system is currently in a prototype phase and has been functionally tested in the consumer goods and pharmaceutical industry. Now we are stepping towards a real-time analysis system that can derive optimized configurations simultaneously to running production operations.

**Your Task:**
The team “smart optimization“ is looking for programming and testing support in the field of back-end development considering big data technologies. In the next step we set up a Hadoop infrastructure, a suitable framework and adjust our development process and existing software packages as well as our data base technologies in order to process our continuous data streams in real time and permanently run our data mining models on it.

Therefore we are looking for motivated programmers that are keen on taking part in our interdisciplinary team, that are skilled in Java, distributed coding with the help of Git and Software testing approaches. First contact with Big Data Technologies such as Hadoop, Apache Storm and NoSQL-Data bases are helpful.

The team is based in Stuttgart, either working in Stuttgart fulltime or part time is preferred in order to get in touch with the team and to facilitate communication.

**Your Skills:**
- Programming in Java (Javascript helpful)
- Experience in using Git for source code handling
- Experience in Software Testing / Testing automation tools
- Experience / Interest in using SCRUM
- Interest in interdisciplinary team work linked to solving production problems with intelligent tools

**What we can offer:**
- Work space at Fraunhofer IPA at Stuttgart
- Connection to researchers and scientists in the field of production system planning and production control systems
- Integration into an interdisciplinary team and getting in touch with industrial partners

We are looking forward to your application!

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