



ABOUT US

At aioneers, we digitalize tactical and strategic decision-making through AIOimpact - our SaaS platform for supply chain management and manufacturing operations. We believe in creating something big with the smartest technologies and people like you.



... AND ABOUT YOU?

You enjoy working in a professionally managed start-up and have fun working together to achieve success through your passion and commitment.

As an aioneers master student, join us on a journey to revolutionize supply chain management. You will be a part of a solid, creative and a unique team with a forever start-up mentality.

WHAT WE LOOK FOR

We are looking for smart and highly motivated students who want to accomplish their Master thesis in an inspirational and dynamic team using state-of-the-art technologies in the arena of supply chain management.

You are a Master student in computer science, informatics or mathematics and have:

- Excellent grades
- Open-minded and entrepreneurial mentality
- Experience in process analytics and process mining
- Experience in supply chain management and supply chain planning
- Good communication skills and fluency in English and German
- Good programming skills in Python

MASTER THESIS BRIEF

Process mining in supply chains: Leverage decision-making in the S&OP process

Various industries are currently facing serious shortage situations, leading to supply problems for companies and their customers. Insightful planning of supply chains can help mitigate bottlenecks and establish stable supply.

The **Sales & Operations Planning (S&OP)** process is a core planning and decision-making process in companies to align mid-term sales plans with the ability to fulfil by manufacturing and distribution. This planning process is crucial to provide high service levels for customers and run supply chains on a profitable and less cash-intensive level. The S&OP process typically comprises five major steps that are performed in a monthly cycle. It consists of several activities in different systems and decisions are often kept in e-mails, presentations and documents. Lack of conformity to the documented standard, no traceability of decisions and results counteract the idea of S&OP and carry the risk poor execution of plans.

Process mining can help to discover the real process flows, identify conformance issues and measure the performance of a process. However, process mining typically assumes a highly-structured, IT-supported process and an according data base, which is not necessarily the case for S&OP.

This **master thesis** should investigate the applicability of process mining in S&OP on a conceptual level. Therefore, the candidate should review the relevant literature and conduct interviews with domain experts to answer the following research questions:

- How could the S&OP process benefit from Process Mining?
- What are prerequisites for applying process mining in S&OP?
- What data is available for the S&OP process?
- How could this data be leveraged for process mining?

CONTACT

Prof. Dr. Jana-Rebecca Rehse
Juniorprofessur für Management Analytics
Universität Mannheim

L 15, 1-6, Raum 413, 68161 Mannheim
+49 621 181-1766
rehse@uni-mannheim.de