

# Bachelor-/ Masterarbeit

Forschungsgruppe: Entwicklungsmethodik/-management

## Kontakt

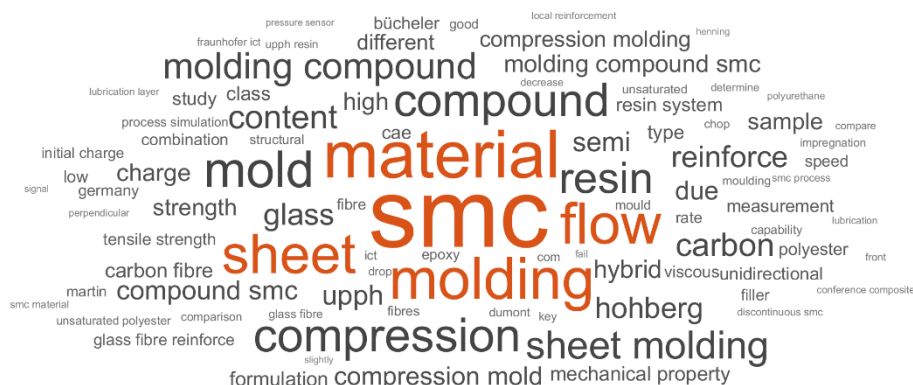
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**Development and implementation of improvements, and if desired, a new concept for a semi-automated database management application software**

In order to assist product developers to better extract accurate and relevant information in a constantly growing knowledge base, a software application is being developed at IPEK.

The application aims to provide users with a list of filters related to their input keyword, which can be subsequently used to identify relevant and useful documents in a knowledge base. Currently, this is achieved by first employing a Latent Dirichlet Allocation (LDA) machine learning model to categorise topics from the extracted text in the knowledge base. The application then identifies matches between the input keyword(s) to those in the categorised topics. Finally, other words in the “identified topic(s)” are displayed as filters.

As the advancement in machine learning algorithms as well as overall technological capabilities progress rapidly, many opportunities to improve on the current concept or develop a new one present themselves. This allows for innovation to take place, which can potentially propel this application software to new heights.



One of the word clouds generated by the machine learning algorithm to identify relevant filters

### Core Tasks:

- Develop and implement improvements for an application software
- Scripting in coding language of current application (MATLAB, PowerShell, VBA) or of choice
- Communicate with German and international researchers for software feedback

## Your Profile:

- Basic programming knowledge
- Prior experience with MATLAB advantageous
- Analytical mindset
- Independent worker
- Willing and open to innovate and learn more

### Benefits:

- Opportunity to develop and implement an application from the ground up
- Honing of programming skills
- Expand boundaries for creative thinking and innovation
- Learn new programming language (s) of choice
- Intensive supervision and support of work and personal development
- Obtain work insight in the field of academia and international research projects