

“THESIS-WAHLKABINE”: DEVELOPING AN ONLINE WEB-BASED PLATFORM FOR MATCHING STUDENTS TO THESIS TOPICS

Keywords: *web-based platform, configurator, text analysis*

Current Situation

Students interested in doing a thesis with the LIT CPS Lab currently contact potential supervisors individually. This makes it difficult to get a broad overview of the topics that are available and to find the right topic for their interests. This process could be automated, similar to a system like wahlkabine.at or votematch.eu

Background

The LIT CPS Lab offers theses in the areas of production automation, software variability and product lines, as well as stream processing. These diverse areas hinder efficient matchmaking. Additionally, a number of study programs are targeted, e.g., Computer Science, Mechatronics, or Artificial Intelligence. Also, diverse supervisors are available.

Content of the Thesis

The goal of this thesis is to develop a web-based platform that allows students to find thesis topics best matching their interests based on answering a few questions. The questions should be generated automatically by analyzing currently available thesis topics specified using natural language, similar to the document you are currently reading. The tool should present results, i.e., relevant topics, to students, after they have answered the questions, as a rated list showing the percentage/probability that a thesis topic will fit. Meaningful rating metrics thus need to be defined. Details on each topic should be linked (similar to this document). The implementation should be made available via github under an open source license to be defined. The Web tool should eventually be deployed on an institute server (during the first phases of the thesis, localhost will do) and linked at <https://www.jku.at/lit/cps-lab>.

Requirements

- Web programming skills
- Knowledge of artificial intelligence methods (to analyze the thesis topic information given in natural language) is beneficial
- Excellent German and/or English skills

Learning Outcomes

- Learning how to build a Web-based configurator
- Applying versioning systems in practice (Git)
- Text analysis methods
- Scientific methods and structuring a complex problem into smaller subtasks

Supervision:



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