

**UNIVERSITI TEKNOLOGI MARA**

**UITM RESEARCH SUPERVISOR  
RECOMMENDATION SYSTEM**

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**JANUARY 2022**

## **ABSTRACT**

When a postgraduate student takes on a research paper, research supervision is a necessity. A qualified supervisor who is an expert in the topic of study is required for the student to understand or grasp the notion of their selected research title. The act of finding a potential supervisor is a hassle and takes a lot of time which is spent seeking the proper person for supervision. The amount of time it takes can better be spent doing the bulk of the research resulting in a more quality product. Thus, the goal of this project is to develop a system that can recommend potential supervisors from the UiTM list of experts that consists of the faculties available at UiTM Tapah for students that are looking to do research, based on their title and abstract of the research paper. By implementing machine learning content-based filtering to filter the similarities using cosine similarity algorithm and web scraping to obtain the needed supervisor dataset, the system can utilize this information and recommend the suitable potential supervisor for the student. The project uses the waterfall model in order to allow better control throughout the given time. Python is the main language used for the project. Python's flask web framework is used to develop the interface of the system and selenium for the web automation used for scraping the supervisor data. The system was tested based on several factors that can affect the accuracy of the recommendation results using the dataset of research papers titles and abstracts. Based on the results, most of the recommendation were successful overall. By using this information, the most optimal approach can be used to provide the best recommendation based on the most influential factors tested. In terms of future work, an implementation of collaborative filtering can be used to learn data from past recommendation of users but would need a large dataset of users to work properly.

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