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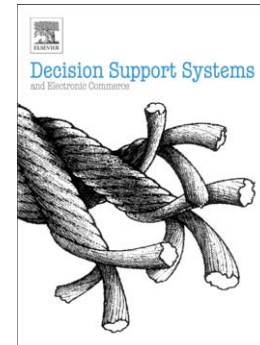
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Michael Reusens, Wilfried Lemahieu, Bart Baesens, Luc Sels

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# Explicit versus Implicit information for job recommendation: A case study with the Flemish public employment services

Michael Reusens<sup>a</sup>, Wilfried Lemahieu<sup>a</sup>, Bart Baesens<sup>a,b</sup>, Luc Sels<sup>a</sup>

<sup>a</sup>*Faculty of Economics and Business, KU Leuven, Naamsestraat 69, 3000 Leuven, Belgium,  
Email: {michael.reusens, wilfried.lemahieu, bart.baesens, luc.sels}@kuleuven.be*

<sup>b</sup>*Southampton Business School, University of Southampton, United Kingdom*

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## Abstract

Recommender systems have proven to be a valuable tool in many online applications. However, the multitude of user related data types and recommender system algorithms makes it difficult for decision makers to choose the best combination for their specific business goals. Through a case study on job recommender systems in collaboration with the Flemish public employment services (VDAB), we evaluate what data types are most indicative of job seekers' vacancy interests, and how this impacts the appropriateness of the different types of recommender systems for job recommendation. We show that implicit feedback data covers a broader spectrum of job seekers' job interests than explicitly stated interests. Based on this insight we present a user-user collaborative filtering system solely based on this implicit feedback data. Our experiments show that this system outperforms the extensive knowledge-based recommender system currently employed by VDAB in both offline and expert evaluation. Furthermore, this study contributes to the existing recommender system literature by showing that, even in high risk recommendation contexts such as job recommendation, organizations should not only hang on to explicit feedback recommender systems but should embrace the value and abundance of available implicit feedback data.

*Keywords:* Recommender System, Job Recommender System, User Behavior

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## 1. Introduction

Looking for a job can be a daunting task for a job seeker. When evaluating an open vacancy (s)he needs to take into account a multitude of factors, such as the type of job presented, location, required experience and certifications, etc. The job seeker needs to make sure that these features match his/her properties and interests. It is unproductive and discouraging for a job seeker to spend a lot of time looking at jobs (s)he is not interested in, or unqualified for. In Flanders (the

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