

講題：Music Recommendation Based on Multiple Contextual Similarity Information

研究領域：資訊檢索、機器學習、自然語言處理、巨量資料分析

演講簡介：

This work proposes a music recommendation approach using various contextual similarity information based on the framework of Factorization Machine (FM). In this talk, we will introduce the FM framework, the idea of similarity, which has been widely studied in the field of information retrieval, and the incorporation of multiple feature similarities into the FM framework. By integrating different number of similarity features, the approach is even able to discover diverse items that users never touched before. In addition, in order to avoid the high computational cost and noise within large similarity of features, we also propose a grouping FM technique to alleviate the problems. In our experiments, a music-recommendation dataset is used to assess the performance of the proposed method. The dataset is collected from an online blogging website (LiveJournal), which includes user listening history, user profiles, social information, and listened music information. Our experimental results show that, with the multiple feature similarities based on the FM framework, the performance of music recommendation can be enhanced significantly. Furthermore, with the proposed grouping technique, the efficiency can also be improved, and the performance still outperforms the traditional approaches.

講者簡介

Ming-Feng Tsai is currently an Assistant Professor in the Department of Computer Science at National Chengchi University. He received his Ph.D. degree from National Taiwan University in 2009. During his Ph.D. study, he was at Microsoft Research Asia as a visiting student with the Web Search & Mining Group, and was awarded by the research center the “Best Intern of the Year.” After receiving his Ph.D. degree, he worked at National University of Singapore as a Research Fellow, participating in a research project related to machine translation. In 2010, sponsored by National Science Council, he joined University of Illinois at Urbana-Champaign as a postdoctoral visitor, working on a project associated with advanced Web search and mining. His research interests span the area of information retrieval, machine learning, web search and mining, social network analysis, and natural language processing, big data analysis.