推薦系統

Recommendation System

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感謝...

摘要

許多線上學習資源現今公開在網路上，像是開方式課程 (Open Coures Ware, OCW) 或是大規模開放線上課堂 (Massive Open Online Course, MOOC)，學習者可能會碰到過度選擇 (Overchoice) 問題。本研究提供不採用使用者資料之標籤式推薦演算法來解決過度選擇問題。在本系統中，採用了 Yake 模型進行關鍵字生成以及 DBPedia 之本體論架構增加標籤之多樣性，針對國立中正大學之課程進行推薦，並利用標籤相似度分析推薦給使用者其他校外學習資源。在實驗中，本研究採用了 AB 測試來進行驗證並證明使用者對於本研究架構較其他架構有高度的接受性。

關鍵字： 到 thesisvar.tex 裡修改 keyword, keyword, keyword, keyword

Abstract

Many extracurricular resources have been published on the internet, like MOOCs and OCW, so the learner who is interested in specific knowledge will encounter the over-choice problem. This work presents a tag-based recommendation system without user profiles to approach over-choice problems. In our system, we use the YAKE model to generate keywords and the Dbpedia ontology database to increase the diversity of the keywords for courses offered by National Chung Cheng University. The system will recommend other courses and extracurricular MOOCs with similar tags to the learner. In the experiment, we use the AB testing method to show that our system can recommend the courses to learners with higher satisfaction than other methods.

Keywords: 到 thesisvar.tex 裡修改 keyword, keyword, keyword, keyword

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第一章　緒論

In recent years, many extracurricular resources have been published on the internet, like Massive Open Online Courses (MOOCs) and Open Course Ware (OCW), so learners can easily learn about any topic of interest. These learning resources that can be used at a computer without restrictions on the time and place and reduce the physical limitations while learning, and can be regarded as e-learning technology [1]. Many universities have provided e-learning resources. However, learners cannot quickly choose the resources to appropriate their requirements, since there are too many choices, which might decrease the learning effect. A tag-based recommendation system is one of the approaches to this problem. The recommendation system is an information-filtering technique that solves the over-choice problems [2]. This system will analyze the properties of extracurricular resources, generate related tags, and recommend them to the learner by finding other resources with similar tags. There are some mainstream methods to implement recommendation systems: content-based filtering, collaborative filtering, and hybrid method [3]. The most common e-learning recommendation system is a collaborative-based filtering recommendation system, which focuses on customized recommendations based on user information [4]. To the best of our knowledge, there are no studies using tag-based, content-based recommendation systems without user profiles. In this study, we propose a tag-based recommendation system without user profiles that will recommend other courses and MOOCs provided by MIT, Coursera, and Udemy, related to courses offered by National Chung Cheng University.

第二章　背景知識及文獻探討

這裡是 related work...

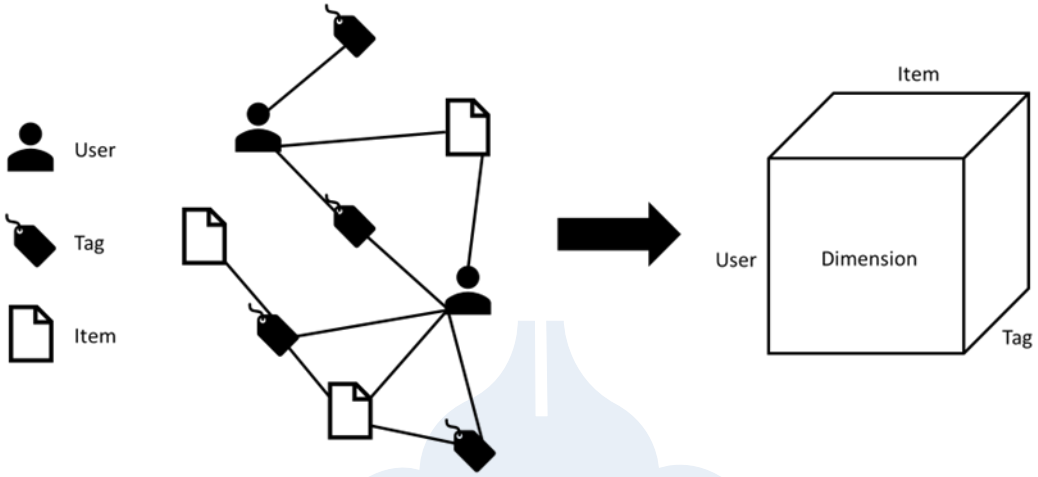

圖 1: 將無向三方圖表示為三維矩陣

第三章　架構方法

Algorithm 1 Bubble Sort

Input: Input Array A[]
Output: Sorted Array A[]
Initialisation :
int i, j, k;
int $N \leftarrow length(A)$;
LOOP Process
for $i = 0$ to $N - 1$ **do**
  for $j = 0$ to $N - i - 1$ **do**
    if ($A[j] > A[j + 1]$) **then**
      swap($A[j]$, $A[j + 1]$)
    end if
  end for
end for
return A

3.1　系統架構說明

這個架構...

第四章　實驗

4.1　實驗方法

表 1: 實驗之混淆矩陣

Predicted / True	Open Drawer 1	Open Drawer 2	Open Drawer 3
Open Drawer 1	62%	0%	0%
Open Drawer 2	28%	35%	0%
Open Drawer 3	1%	15%	63%

4.2　實驗一

- **實驗目的** 我們將依照4.1節所述的方法，進行實驗。
- **實驗步驟** 實驗方法如下：

第五章　結論

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附錄 A

The contents...

附錄 B

這裡是附錄 B