

Thesis Topic:

Using AI and Web Crawling Techniques for Dynamic Precision Recommendation in E-commerce Platforms: A Case Study of the PChome E-commerce Platform



Presented by Yung-Hsin Chang (Cindy)
from institute of information management



National Taipei
University

Software Engineering Midterm
Instructor: Min yuh Day

Overview

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Research Background



“ In 2023, 50.76% of the population aged 18 and above had the habit of shopping online. ”

–Taiwan Network Information Center, 2023



Employ **recommendation systems** to suggest relevant products to users, aiming to **enhance user experience and platform performance.**



Research Motivation

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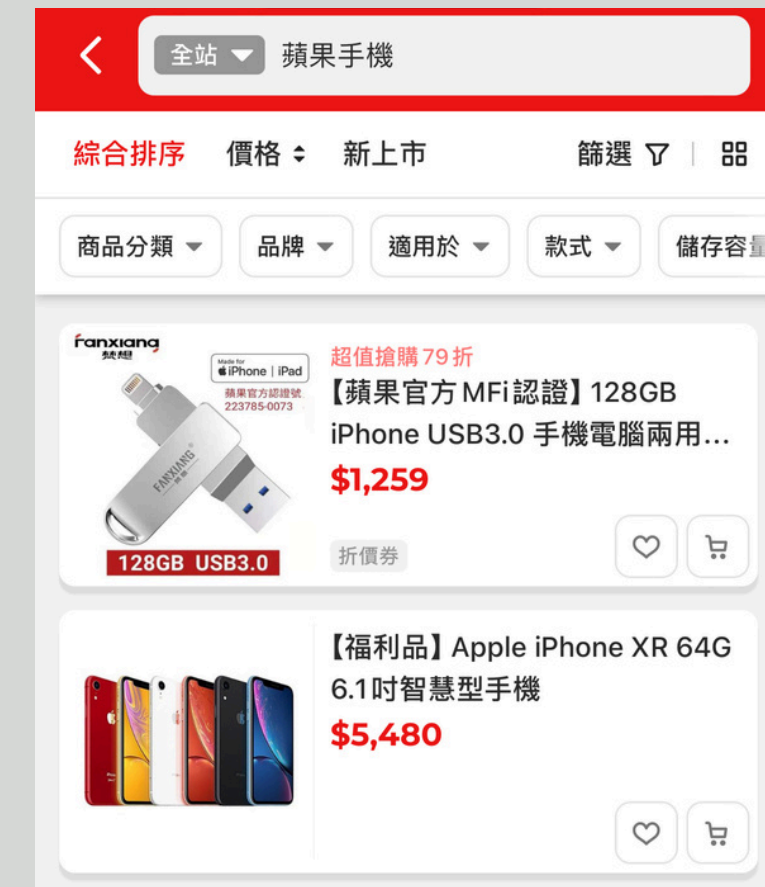
- products continues to increase
- users' personalized needs grow
- recognizing the limitations of PChome's recommendation systems

PChome's website performance

Total Visits ⓘ 15.7M	Last Month Change ⓘ ▲ 4.1%	Bounce Rate ⓘ 49.9%	Pages per Visit ⓘ 5.29	Avg Visit Duration ⓘ 00:04:52
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<https://www.similarweb.com/website/24h.pchome.com.tw/>

Apple cellphone 🔍



No.1 USB ❌

No.2 Cellphone ✅

<https://24h.pchome.com.tw/search/?q=%E8%98%8B%E6%9E%9C%E6%89%8B%E6%A9%9F>

Research Objective

OBJ. 1

Based on input keywords, develop a prototype of a precision recommendation system using AI technique.

OBJ. 2

Incorporate a dynamic recommendation system mode based on user behavior within the platform.

OBJ. 3

Validate that through the recommendation system, the platform performance and effectiveness can be improved.

Expected Research Contributions 01

Providing theoretical and practical value for the research on recommendation systems and the development of e-commerce platforms, thereby promoting the advancement of the e-commerce industry.

Managerial Implication 02

- Enhance user experience that can increase sales and revenue
- Operational efficiency
- Data-driven decision making

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Yung-Hsin Chang (Cindy)
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THANK you

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