**Chengdu University of Technology Oxford Brookes College**

**Project Module (CHC 6096)**

**Weekly Report Sheet - 2023/2024 Academic Year**

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| WEEK NUMBER | 4 |
| DATE: | 2023/12/26 |
| **Action plan for the current week:**   1. Research on Recommender Systems:  * Define research objectives: Clearly define the goals and scope of the study on recommender system construction and common algorithms. * Collect materials and literature: Retrieve articles related to recommender systems and collaborative filtering using academic search engines and databases such as IEEE Explore. Additionally, utilize platforms like CDUT e-library and Research Gate to find more resources on recommender systems and e-commerce. * Read and analyze literature: Thoroughly read and analyze the collected literature and resources. Understand the construction of recommender systems and common algorithms, including collaborative filtering. * Record types of algorithms: Summarize and record the commonly used types of algorithms in existing recommender systems. Classify and categorize them based on different recommendation methods, such as content-based recommendation, collaborative filtering, deep learning, etc. * Record recommendation algorithms in e-commerce: Pay special attention to the types of recommendation algorithms used in the e-commerce domain. Understand how e-commerce platforms utilize recommender systems to provide personalized product recommendations. * Summarize and organize findings: Based on the readings and recorded results, summarize and organize the main discoveries regarding recommender system construction and common algorithms.  1. Investigation on the Construction and User of Existing Food Delivery Platform Software:  * Define research objectives: Clearly define the goals and scope of the study on the construction and user orientation of existing food delivery platform software. * Select survey samples: Choose several globally prominent food delivery platforms as survey samples, such as Meituan, Ele.me, and Uber Eats. These platforms represent different markets and user demographics. * Market research: Utilize market research tools like Statista to investigate the market size, growth trends, and user distribution of food delivery platforms. Understand the market positions and competitive advantages of different platforms. * Function analysis: Download and use the selected food delivery platform software, record and analyze their features and characteristics. * Investigation of recommender systems: Attempt to understand how these food delivery platforms recommend products to users. Learn about the recommender algorithms they employ, the level of personalization in recommendations, and the importance of user feedback. * Summarize and organize findings: Based on market research, function analysis, investigation of recommender systems, and user feedback, summarize and organize the main discoveries regarding the construction and user orientation of existing food delivery platform software. | |
| **Challenges and issues encountered in the week:**   1. Marketing Analysis:  * Limited availability of reliable market data sources. * Difficulty in analyzing and interpreting complex market data.  1. Literature Review:  * Some literature sources were inaccessible due to unavailable pdf files. * Inefficient search process resulted in low efficiency in identifying relevant literature. | |
| **Action plan for the next week:**   1. Analysis of Common Recommendation Algorithms and Models:  * Research on recommendation algorithms: begin by studying fundamental recommendation algorithms such as popularity-based recommendations, content-based recommendations, and collaborative filtering. Analyze their principles, advantages, disadvantages, and implementation methods. * Study Deep Learning algorithms: research deep learning-based recommendation algorithms, such as neural network-based recommendations, autoencoders, and recurrent neural networks. Analyze their performance and implementation difficulty. * Compare Different Algorithms: Based on the collected information, compare the strengths, weaknesses, applicability, performance, and implementation difficulty of different recommendation algorithms and models. Select the most suitable algorithm based on specific requirements  1. Analysis of User Needs for Food Delivery Platform Software:  * Collect User Data: Gather user data on food delivery platform software through literature reports, data analysis, and other methods. Key data should include user demographics, usage habits, needs, and pain points. Identify commonalities and differences in user needs. * Identify Main User needs: Analyze the collected user data to identify and summarize the primary user needs. These needs may include convenient and efficient ordering processes, diverse food options, timely delivery, and promotional activities. * Prioritize User needs: Based on the importance of user needs, prioritize them into different levels. This helps determine which needs should be addressed first and facilitates resource allocation during product development. * Conduct Competitor Analysis: Study competitors' food delivery platform software such as Meituan, analyze their strengths and weaknesses in meeting user needs. Use this analysis to further improve your own product. | |
| **Supervisor Feedback:** | |