Python Programming and Practice

Development of a Personalized Perfume Recommendation System

Proposal

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1. Introduction

1) Background

The perfume market continues to grow steadily, unaffected by external factors such as economic uncertainty. Consequently, the industry anticipates the perfume market to remain stable for the foreseeable future. Additionally, with the diminishing impact of the COVID-19 pandemic, the reduced usage of masks has led to increased interest in perfumes. However, the expansion of the perfume market has resulted in the release of numerous products, making it challenging for customers to find a fragrance that suits them. Furthermore, exposure to too many scents at once can lead to olfactory fatigue. Therefore, to address these issues, a system recommending customized perfumes to customers is deemed necessary.

2) Project goal

The goal is to develop a system that, when provided with information about a customer's favorite or preferred fragrance, recommends similar perfumes to enhance customer satisfaction.

3) Differences from existing programs

The existing programs recommend new perfumes based on the customer's past purchase history. However, these recommendations may not align with the customer's current preferences as they rely on outdated buying patterns. In this system, the customer directly inputs their favorite fragrance, and the system recommends perfumes with similar characteristics. Additionally, the system takes into account not only the fragrance notes but also the description (feel and features) to provide recommendations, offering a differentiation from existing programs.

2. Functional Requirement

1) Function 1 (**Identifying Similar Fragrances**)

- A feature that locates perfumes with scents similar to the one entered by the customer.

(1) Detailed function 1

- Classifying Similar Fragrances Based on Notes and Finding the Most Similar Perfume to Customer's Input

(2) Detailed function 2

- Tokenizing Perfume Descriptions (Feel and Features) and Finding the Perfume with the Highest Similarity to User-Entered Description

2) Function 2 (**Adding Perfume to wishlist.txt**)

- Adding Recommended Perfume to Wishlist

(1) Detailed function 2

- Creating wishlist.txt File

- Adding Perfume Name and Brand to the Wishlist:

- Removing Previously Purchased Perfume from the List:

3. Schedule

WORK		11/3	11/10	11/17	11/24	12/1	12/8	12/15	12/22
Create a proposal		■							
Structure design, Progress report creation		■	■						
Function 1	Detailed function 1		■	■					
Function 1	Detailed function 2			■	■				
Create a progress report						■			
Function 2						■	■		
create a progress report							■	■	
Finalizing a project, Making a final report							■	■	■