CS411: Final Project Proposal

1. **Title:** Scentastic
2. **Project Summary:**

One area of fashion is completely overlooked in terms of accessibility and user friendliness- the fragrance industry. The subjectivity of fragrance allure and the at times inordinate prices can drive away individual consumers looking to experiment with their personal style and experience. The fragrance industry is overpopulated by ancient reputations held by designer brands that only offer standard variations of beaten-to-death scents, and many unique fragrances lack the exposure to actually end up in consumers' homes.

We wish to solve this problem with our platform, Scentastic: a website that displays a wide variety of consumer fragrances alongside price and images, with our unique ScentScore - compiled using a review dataset from real people instead of bot or bland reviews. We prioritize highlighting the unicorns of the fragrance industry by allowing users to search based on price point and ScentScore, as well as a user-focused quiz called ScentSense - allowing users to pick either notes, smells, or tones within the fragrance, or desired results from using a fragrance, such as attraction, respect or calming. This allows us to deliver the perfect fragrance for users at their price point and preference.

3. **Description of an application:**

A huge problem in the personal fragrance industry is that it's very hard for the average consumer to find a high quality and affordable scent that matches their scent profile and preferences. Big brands dominate the market and are overpromoted over smaller fragrances that may be the perfect fit but do not get the exposure they deserve. Buying fragrance in-store runs into a similar issue- oversaturation of big brands, as well as department stores charging massive markup prices on products in order to cover stocking costs.

We wish to make a fragrance finder website that combines datasets of fragrance information such as cost, price, brand, and smell/tones with datasets of fragrance reviews to help consumers find the right fragrance for their needs. This solves the problem of lots of hard to find, unique scents that are affordable to consumers being inaccessible. Our website will spotlight scents that aren't brand name or oversaturated in the market. In addition to this, we will also link high quality dupes for popular scents such as the ones made by Dossier to promote affordability and accessibility into the fragrance market.

4. **Creative Component:**

Our creative component will be an interactive quiz. The quiz will contain questions gauging their preferences on notes, smells, and tones or emotions that they want to portray.

Each question will modify cumulative scores being tracked throughout the quiz. After finishing the quiz, the user will be given a data visualization of perfumes that fit them the best in relation to the cost of their perfumes. This visualization will also highlight dupes of the product that have the same “fit for you” score, but at a lower price point. The specific method of display can be seen in the UI design below.

This feature is the main thing lacking in current fragrance finding solutions. Even sites that offer many dupes to mainstream big brand products, the user must have an original perfume in mind or have to go through a long process to get only one perfume result. Many consumers looking for products within a smaller budget often don’t know what mainstream scent they would like, and want the option to compare different perfumes so that they feel the satisfaction of making the “right” choice for them as doubt arises when only presented with one option.

To implement this, each question will give the user a set of options on what emotions their desired perfume would evoke, how important different features of a fragrance are to them, etc. Each criteria will be given a numerical rating that changes throughout the quiz. Higher values of a criteria indicate that the user places value in this criteria and vice-versa. To display a graph of the predictions, we will use Matplotlib to plot points of ScentScore relating to the cost.

5. **Usefulness and Similar Existing Applications:**

Usefulness: This web application is especially useful for people who are new to the fragrance industry. There are many aspects of scents that go overlooked in selecting one’s scent which removes the personalization that is needed for a scent to truly be a good fit for someone’s needs. Some examples of this personalization include the emotion that a scent evokes, the strength of the smell, and the context in which a scent would be used. Our application automates the process of looking for the right scent among the millions of scents available in a way that the customer can visualize their choices.

The basic functions of our application are giving the user an interactive quiz that introduces certain important aspects of fragrances, recommending specific scents for their purposes, and visualizing these recommendations in a graph. The most similar website/application to ours is Dossier which contains a “Find Your Scent” feature. This mainly resembles a chatbot and also only gives the user one recommendation without any kind of visualization and acknowledgement of cost. Our application is not a chatbot; it offers a user-friendly quiz with answer choices, giving a more objective and logical output. In addition, our application visualizes multiple possible choices for the user to browse, linking each choice with cost. This way, more expensive choices can be ruled out easily if needed.

6. **Realness:**

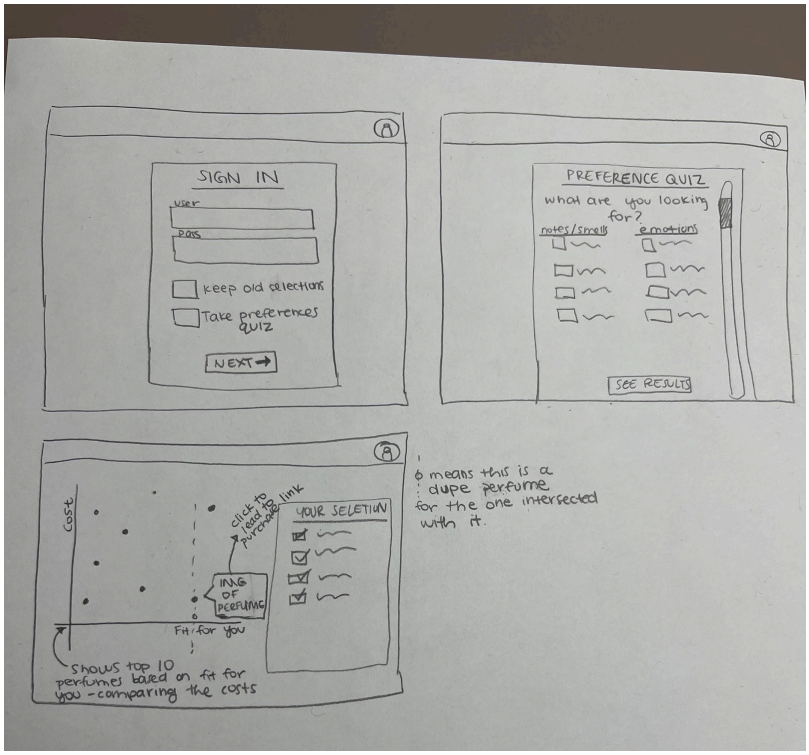
Our primary data source is from Kaggle (https://www.kaggle.com/datasets/nandini1999/perfume-recommendation-dataset). This is a

CSV file containing general information about a vast variety of perfumes including Perfume Name, Brand, Description, Notes, and Image URL. This dataset gives an overview of the many options out there that we could recommend.

Our second data source is https://jlk15-dev-ed.my.site.com/jkperfume/s/ which is a website that includes real person reviews for a multitude of perfumes, giving insight on the vibe and feel of the perfume. This type of insight is helpful to give our user insight on the emotions that they would portray wearing each of these perfumes.

We are also using https://rapidapi.com/remote-skills-remote-skills-default/api/fragrancefinder-api which is an API that finds dupes of different perfumes to provide our user with similar satisfaction options at a variety of pricepoints.

7. **Detailed description of Functionality:**
    - UI Mockup:



When the user enters our website, they are prompted with a sign in button that allows them to either save their previous choices, which would lead them to a visualization that was generated earlier which was saved on their account. Otherwise, they are given the choice to retake the quiz which would generate a new visualization with new options. If they are a new user, they would automatically be redirected to the quiz page through which they would make

their selection preferences on notes/scents and feelings they would like to embody with this perfume. From there they would be taken to the visualization page, where their choices are displayed and their top 10 perfumes found to be the best fit for them are displayed on a graph, considering both fit and cost. From these 10 perfumes, utilizing the API, we will also be able to find dupes of their top picks and display those options as well. This correlation will be shown by having an open bullet point that has a dashed line leading to the original branded perfume. This would allow for users to make a determination of whether price point or brand name is more important to them. From this display, users will be able to click on each point, displaying an image and name of the perfume it correlates with. Further clicking on the image will directly lead to a purchase page on a separate tab. With these features, the purchasing process is much more simplified, while still allowing the users a feeling of making a choice.

8. Project work distribution:

- Backend:
    1. Richie will work on leveraging the two datasets we're using, connecting them to the application, and designing the quiz's backend to calculate a score based off the data in these two sets.
    2. Rithvik will work on designing the backend aspects of managing a database of users along with the authentication processes involved.
- Frontend:
    1. Lathika will work on designing the data visualization, linking it to the quiz calculations being done on the backend. This involves producing a graph of the results.
    2. Anish will work on designing the frontend of the signup/login page, as well as the flow of the ScentSense quiz.