**Project Design Phase-I**

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| **Date** | 24 September 2022 |
| **Team ID** | PNT2022TMID11603 |
| **Project Name** | Smart Fashion Recommender System |
| **Maximum Marks** | 2 Marks |

**Proposed Solution :**

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| **S.No.** | **Parameter** | **Description** |
|  | **Problem Statement (Problem to be solved)** | Online apparel shopping has been growing at a surprising speed in recent years.It is hard to know quickly and accurately what the user wants. This phenomenon leads to an extremely low utilization of information, also known as the information overload problem. keywords are used to retrieve images, but such methods require a lot of annotations on the image data, which will lead to serious problems such as inconsistent, inaccurate, and incomplete descriptions, and a huge amount of work.  One of the main drawbacks of online shopping is the lack of such service. Virtual try-on and fashion synthesis systems are the solutions to this problem, preventing customers from buying unsuitable and unexpected items, making sure to provide the customers with an enjoyable experience. Moreover, they can decrease the refunding rate of online stores. That is why a review is necessary of this critical subject. |
|  | **Idea / Solution description** | To solve this problem, Content Based Information Retrieval (CBIR) has gradually become a research hotspot. CBIR retrieves picture objects based entirely on the content. The content of an image needs to be represented by features that represent its uniqueness. Basically, any picture object can be represented by its specific shapes, colors, and textures. These visual characteristics of the image are used as input conditions for the query system, and a result the system will recommended nearest images and data set. This model can use deep learning approach to extract various attributes from images with clothes to learn the user’s clothing style and preferences. These attributes are provided to the correspondence model to retrieve the contiguous related images for recommendation.  The primary focus is on two categories of AI fashion applications: 1) Fashion virtual try-on and 2) Fashion synthesis. |
|  | **Novelty / Uniqueness** | **The uniqueness of our project is to recommend:**  Accessories to the selected dresses.  Products with cost variation.  Similar product with short dispatch durations. |
| **4.** | **Social Impact / Customer Satisfaction** | The increasing popularity of online fashion and online retail platforms is having a visible impact on the shopping experience of billions of customers, making millions of products available in online catalogs thus eliminating the need for physical visits to various stores and for waiting in long queues or trying on clothes in dressing rooms by providing personalized and affordable deliveries. This in turn has created novel challenges for platform providers, within which proper understanding of fashion choices of shoppers plays a crucial role. Shoppers tend to feel overwhelmed by the sheer choice of the assortment and brands, not being able to receive effective suggestions matching their style preferences as well as not being able to spot the right size and fit during the shopping experience. As a result, recommender systems are gaining momentum by mining.  The satisfactions is achieved when a customer get the exact product with reasonable cost.  The impact gets lower when the site shows off the product with all features anf failed to delivar the exact one as shown and when the quality gets decreased. |
| **5.** | **Business Model (Revenue Model)** | The model should be able to scan across all 280,000+ product images and automatically generate a group of recommended products that are customized to what the user has viewed/bought.  Speed is of the essence in an eCommerce firm. The group of recommended products should be generated within 2ms to meet the “real-time” requirements of the pipeline.  The model should be able to adapt to new trendy products and new users. |
| **6.** | **Scalability of the Solution** | The application should be flexible so that it gets updated with new features and recent trendy products automatically as per users style of selection. |