



SNS COLLEGE OF ENGINEERING
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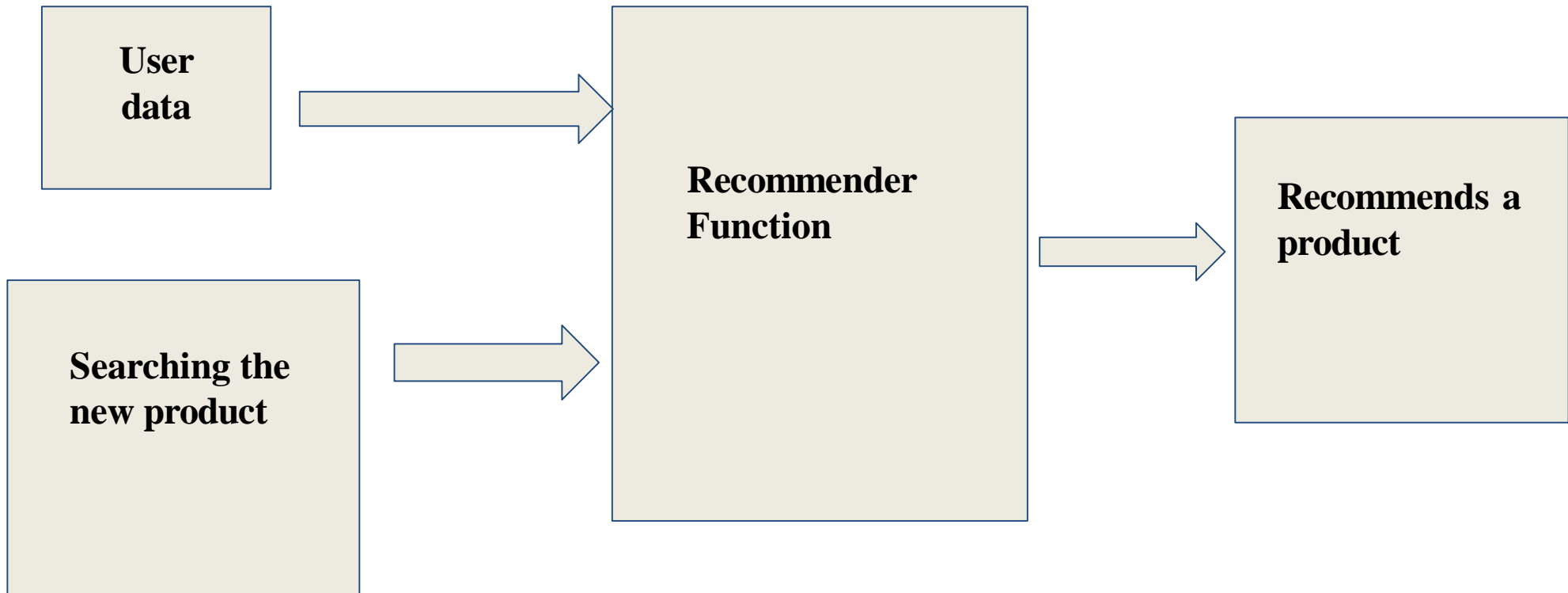


**DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND DATA
SCIENCE**

Recommender System



RECOMMENDER SYSTEM FUNCTIONS





RECOMMENDER SYSTEM FUNCTIONS



- An important component of any of these systems is the recommender function which takes information about the user and predicts the rating that user must assign to a product.
- Predicted user ratings, even before the user has actually provided one, makes recommender systems a powerful tool



RECOMMENDER SYSTEM FUNCTIONS



How do Recommender systems functions?

Understanding Relationships:

- Relationships provide recommender systems with tremendous insight, as well as an understanding of customers.
- There are three main types that occur:
 1. User-product Relationship
 2. Product-Product Relationships
 3. User-User Relationships



RECOMMENDER SYSTEM FUNCTIONS



1. User-product Relationships:

- The user-product relationship occurs when some users have an affinity or preference towards specific products that they need.
- **For Example:** A cricket player might have a preference for cricket-related items. Thus the e-commerce website will build a user-product relation of Player->cricket.

2. Product-Product Relationships:

- Product-product relationships occur when items are similar in nature, either by appearance or description.
- Some **examples** include books or music of the same genre, dishes from the same cuisine, or news articles from a particular event.



RECOMMENDER SYSTEM FUNCTIONS



3. User-User Relationship:

- User-user relationships occur when some customers have similar taste with respect to a particular product or service.
- Examples include mutual friends, similar backgrounds, similar ages, etc.



RECOMMENDER SYSTEM FUNCTIONS



Data Recommender Systems:

- In addition to relationships, recommender systems utilize the following kinds of data:

1. User Behavior data

2. User Demographic data

3. Product attribute data



RECOMMENDER SYSTEM FUNCTIONS



1. User Behavior Data:

- User behavior data is useful information about the engagement of the user on the product. It can be collected from ratings, clicks and purchase history.

2. User Demographic Data:

- User Demographic information is related to the user's personal information such as age, education, income and location.

3. Product attribute data:

- Product attribute data is information related to the product itself such as genre in case of books, case in case of movies, etc. in case of food.

