Overview: Recommender Systems

Agenda

- The Age of Information
- Recommendations and Recommender Systems

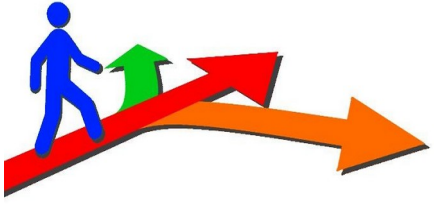
The Age of Information

- Today, data and information continues to grow exponentially throughout the globe.

  One of the statistics to have come out from this is that the total volume of the world's data **roughly doubles every two years.**

- As a result of this growth, we have created an information overload, and **too many choices for the consumer of any business.** In some ways, this could be thought of as a **paradox of choices**, and it represents a real dilemma for these consumers.

A famous school of thought is that
when you give people too many choices, they will turn to denial.



So can we do something about this?

Yes - Recommender Systems to the rescue!

Recommender Systems are one of the best tools a business can employ to solve the problem of information overload. They are focused on providing **personalized recommendations** that limit the amount of information a user gets to what's most relevant for the user and what's most likely to keep them engaged.

You can sit back and relax - Recommender Systems will filter out the noise and give you relevant, personalized information that will help you make your decisions.

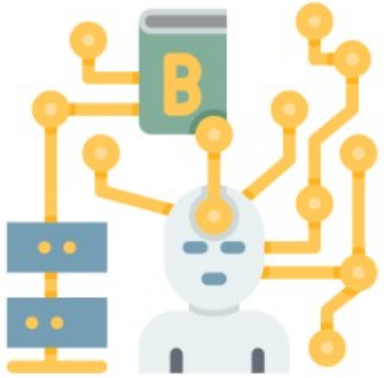
What do we mean by “Recommendation”?

If you give someone a *recommendation,* you're saying, "try this, it's good" or "this is the best way to proceed”.

Recommender Systems

- Recommender Systems then, are merely **filtering processes that have been developed to solve the information overload problem.** They can do this by providing **personalized suggestions** of products to specific customers according to their unique preferences.

- This fits in well with the needs of modern-day customers, who prefer personalized experiences and want to feel uniquely valued and catered to by the services they utilize.

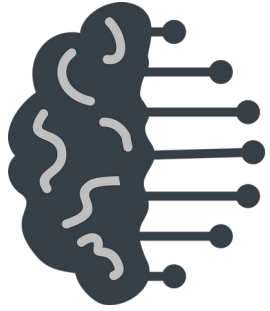


Recommender Systems

- The big question then, is of course, **how exactly** do Recommender Systems filter out the noise and provide suggestions that would be more personalized and relevant for a user than just a random selection?

- In many ways, **Recommender Systems are just a re-formulation of the same problem of making intelligent predictions** using techniques from across the scope of Artificial Intelligence and Machine Learning.

  Hence, the theory behind Recommender Systems is truly vast, and it has drawn from every other field of research in Data Science, Machine Learning and AI.



Summary

- We've understood the core modern-day problem that the data & information explosion taking place in the world today has altered the dynamics of business-customer interactions. Customers have a lot of information at their disposal to make decisions, and information overload usually leads to a decision-making paralysis and eventually customer attrition.
- A good way to mitigate this problem is to place an information-filtering system in front of the customer that prioritizes showing them smart, personalized suggestions which are likely to keep them engaged and prevent attrition. This is exactly what Recommender Systems do.
- This is ultimately a re-formulation of the idea of making intelligent predictions in various contexts, which is the basis of all of Data Science, Machine Learning and Artificial Intelligence. Hence, the theory behind Recommender Systems is vast in scope and closely tied to the latest advancements in all of these fields.

Great Learning

Happy Learning !