Medical Diagnosis and Treatment as a Recommendation Problem

Keynote

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ABSTRACT

The traditional definition of the recommender problem involves estimating a utility function that automatically predicts how much a user will like or prefer an item. In this talk we will explore how to extend that definition to cover important aspects of healthcare such as patient diagnosis and treatment. In this particular context, our goal should be to find methods that estimate a utility function that automatically predicts a patient's current condition and how much she will benefit from a particular treatment. We will dive into recent uses of AI and ML methods for automatic diagnosis and discuss the importance of taking into account personalization, context, and other variables in the optimization process. On the other hand, we will discuss some of the challenges related to the design of a compelling user interface that favors not only accurate information gathering but also user trust and engagement.

BIO

Xavier Amatriain is currently co-founder and CTO of Curai, a Healthcare AI company. Previous to this, he was VP of Engineering at Quora and Research/engineering Director at Netflix, where he led the team building the famous Netflix recommendation algorithms. Before going into leadership positions in industry, Xavier was a research scientist at Telefonica Research and a research director at UCSB. With over 50 publications (and almost 3k citations) in different fields, Xavier is best known for his work on machine learning in general and recommender systems in particular. He has lectured at different universities both in the US and Spain and is frequently invited as a speaker at conferences and companies. Xavier has been closely involved with the ACM Recsys conference since its first edition.