

**The Faculty of Management
The Department of Knowledge and Information Management
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**Rethinking Collaborative Filtering: A Practical Perspective on
State-Of-The-Art Research Based on “Real-World” Insights and
Challenges**

**Dr. Noam Koenigstein
Head of Data Science, Citi bank's Innovation Center, Israel**

**Monday, February 5th at 12:00 pm
Jacobs Building, room no. 506**

Abstract

In this talk, we will walk through some key challenges in Collaborative Filtering recommendations as reflected in my research at Microsoft. We will cover different works on various open research problems such as One-Class Matrix Factorization, Embedded Feature Selection for Collaborative Filtering, Fast Retrieval of Recommendations, a novel playlist generation model and more.

Finally, I wish to initiate a discussion on some key assumptions behind much of the main-stream research: What is the difference between predicting future user actions and optimizing Key Performance Indicators (KPIs)? Is there really a trade-off between accuracy and diversity or can we formulate the problem differently? Why supervised collaborative filtering based on historical data is still relevant in the face of reinforcement approaches? What evaluation metrics can be used prior to online experimentations and what are their limitations?

Bio:

Noam Koenigstein received the B.Sc. degree in computer science (cum laude) from the Technion - Israel Institute of Technology, Haifa, Israel, in 2007 and the M.Sc. degree in electrical engineering from Tel-Aviv University, Tel-Aviv, Israel, in 2009. In 2013 he received a Ph.D. degree from the School of Electrical Engineering, Tel-Aviv University. In 2011, he joined the Xbox Machine Learning research team in Microsoft, where he developed the algorithm for Xbox recommendations serving millions of users worldwide. From 2014 until 2017 he led the recommendations research team for Microsoft's Store. Today he serves as Head of Data Science for Citi's Innovation Center in Israel.

All Are Welcome

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