

# Olivier JEUNEN

## Doctoral Research Scientist at the University of Antwerp

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*I'm a Doctoral Research Scientist in the Adrem Data Lab at the University of Antwerp, supervised by Prof. Dr. Bart Goethals.  
My research focuses on the intersection of machine learning, information retrieval and causal inference.*

## PROFESSIONAL EXPERIENCE

November 2021 October 2017	Doctoral Research Scientist Research focused on implicit-feedback recommender systems and their evaluation in the Adrem Data Lab.	UNIVERSITY OF ANTWERP, Belgium
August 2021 June 2021	Research Scientist Intern Research centred around causal inference for machine learning and information retrieval.	SPOTIFY, London, United Kingdom (Remote)
November 2020 September 2020	Research Engineer Intern Research centred around uncertainty estimation for causal models in computational advertising.	FACEBOOK, London, United Kingdom (Remote)
September 2019 June 2019	Research Scientist Intern Research centred around applications of counterfactual inference for recommender systems.	CRITEO AI LAB, Paris, France
August 2017	Data Scientist Back-end development for a real-time recommendation architecture.	FROOMLE, Antwerp, Belgium
June 2017 July 2016	Data Scientist & Research Intern Research on distributed learning for computational advertising.	PREDICUBE, Antwerp, Belgium
June 2017 September 2015	Data Scientist & Research Intern Internships, student jobs and MSc thesis focused on machine learning applications with IoT data.	TECHNICOLOR, Antwerp, Belgium

## EDUCATION

Present October 2017	Doctor of Science in Computer Science (Ph.D.) University of Antwerp, Belgium	(Expected Graduation: September 2021)
September 2019	ACM Summer School on Recommender Systems	University of Gothenburg, Sweden
June 2017 September 2015	Master of Science in Computer Science (M.Sc.) University of Antwerp, Belgium	Magna cum laude
Jan. – June 2015	Erasmus Exchange Programme	University of Edinburgh, United Kingdom
June 2016 September 2012	Bachelor of Science in Computer Science (B.Sc.) University of Antwerp, Belgium	Cum laude
2012 2006	High School Diploma: Latin – Mathematics Moretus-Ekeren, Belgium	Extra mathematics

## TECHNICAL SKILLS & RESEARCH INTERESTS

Programming	C, C++, Java, Python, SQL
Frameworks	Apache Hive, Keras, Numpy, Pandas, PyTorch, Scipy, Scikit-Learn, Apache Spark, Tensorflow
Research Focus	Causal inference, information retrieval, machine learning, recommender systems

## LANGUAGES

Dutch	● ● ● ● ●
English	● ● ● ● ●
French	● ● ○ ○ ○
German	● ○ ○ ○ ○

## HONOURS, AWARDS & ACHIEVEMENTS

> The Web Conference (WWW) '21	Student Scholarship Award
> Criteo's RecoGym Challenge '20	Led 1st place team (3,000 EUR)
> ACM RecSys '19	Doctoral Symposium & SIGCHI Travel Grant (1,500 USD)
> ACM WSDM Cup '19	5 <sup>th</sup> place out of 386 teams

<b>Program Committee</b>	ACM Conference on Recommender Systems ( <b>RecSys '21</b> ) Main and Late-Breaking Results Tracks, RecSys '21 Workshop on Online Recommender Systems and User Modeling ( <b>ORSUM '21</b> )
<b>Journal Reviewer</b>	ACM Transactions on Information Systems ( <b>ToIS</b> ), IEEE Transactions on Knowledge & Data Engineering ( <b>TKDE</b> ), Manning Publications Co.
<b>Co-organisier</b>	Dutch-Belgian Information Retrieval Workshop ( <b>DIR '20</b> ) and Antwerp School of AI Meetups
<b>Student Volunteer</b>	ACM Conference on Recommender Systems ( <b>RecSys '19</b> )
<b>Member</b>	Association for Computing Machinery ( <b>ACM</b> ) Special Interest Groups ( <b>SIG</b> ) on: Computer-Human Interaction ( <b>CHI</b> ), Information Retrieval ( <b>IR</b> ), Knowledge Discovery & Data Mining ( <b>KDD</b> )

## TEACHING & INVITED TALKS (EXCLUDING CONFERENCE & POSTER PRESENTATIONS)

### Teaching

2017 - 2021	Research Thesis Supervisor and Jury Member	M.Sc. Computer Science, University of Antwerp, BE
Sept. 2019	Bandit Feedback and Likelihood Models for Recommendation	RecSys Summer School, Gothenburg, SWE
June 2019	Neural Networks and Causal Recommendation	Data Science Summer School, École Polytechnique, FR
2019 - 2020	Artificial Intelligence Project	M.Sc. Computer Science, University of Antwerp, BE
2017 - 2019	Project Data Science	M.Sc. Computer Science, University of Antwerp, BE

### Tutorials

Apr. 2021	Recommender Systems through the Lens of Decision Theory	WWW '21, Online
July 2020	A Gentle Introduction to Recommendation as Counterfactual Policy Learning	UMAP '21, Online

### Invited Talks

Oct. 2021	Realigning Offline Objectives with Online Success	ORSUM Workshop <b>Keynote</b> at RecSys '21, NL
Sept. 2021	Realigning Offline Objectives with Online Success	Zalando, Online
July 2021	Realigning Offline Objectives with Online Success	Farfetch, Online
Mar. 2021	Recommender Systems as (Offline) Bandit Learning	Cornell University, Online
Dec. 2020	Joint Policy-Value Learning for Recommendation	DIR '20, Online
Aug. 2020	Joint Policy-Value Learning for Recommendation	AISC Machine Learning Explained Seminars, Online
Feb. 2020	Counterfactual Policy Learning for Recommendation	SMiLe '20, DE
Dec. 2019	Counterfactual Policy Learning for Recommendation	DBDBD '19, NL
Nov. 2019	Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments	DIR '19, NL
Nov. 2019	Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems	University of Glasgow, UK
Sept. 2019	Counterfactual Policy Learning for Recommendation	Data Science Meetups, BE

## OPEN-SOURCE PROJECTS (EXCLUDING IMPLEMENTATIONS OF PUBLICATIONS)

RECOGYM – A REINFORCEMENT LEARNING SIMULATOR FOR RECOMMENDER SYSTEMS	GitHub  Blogpost	JUNE 2019
WSDM CUP: SPOTIFY SEQUENTIAL SKIP PREDICTION	CrowdAI  Workshop Paper  GitHub	JAN. 2019
VARIOUS KAGGLE COMPETITIONS	Kaggle	2017-2018

## PATENTS

A Method for Allocating Frequency Channels to a Plurality of Neighbouring Access Points.  
 O. Jeunen, E. Zeljkovic, P. Bosch, K. Van Doorselaer, N. Godman. June 2017. eu 17305724.1 – 1875.  
 Patent Granted by USPTO and EPO – Application Pending in Brazil and China.

## PEER-REVIEWED ACADEMIC PUBLICATIONS

### Journal Papers

1. Embarrassingly Shallow Auto-Encoders for Dynamic Collaborative Filtering. Springer UMAP  
 O. Jeunen, J. Van Balen and B. Goethals. 2021.  
 Under revision for Special Issue on Dynamic Recommender Systems and User Modelling (DyRSUM).

## Conference Papers

2. **Pessimistic Reward Models for Off-Policy Learning in Recommendation.** ACM RecSys '21  
O. Jeunen and B. Goethals.
3. **Top-K Contextual Bandits with Equity of Exposure.** ACM RecSys '21  
O. Jeunen and B. Goethals.
4. **Closed-Form Models for Collaborative Filtering with Side-Information.** ACM RecSys '20  
O. Jeunen, J. Van Balen and B. Goethals. (Late-Breaking-Result)
5. **Joint Policy-Value Learning for Recommendation.** ACM SIGKDD '20  
O. Jeunen, D. Rohde, F. Vasile and M. Bompaire.
6. **Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments.** ACM RecSys '19  
O. Jeunen, K. Verstrepren and B. Goethals.
7. **Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems.** ACM RecSys '19  
O. Jeunen. (Doctoral Symposium)
8. **A Machine Learning Approach for IEEE 802.11 Channel Allocation.** IEEE CNSM '18  
O. Jeunen, P. Bosch, M. Van Herwegen, K. Van Doorselaer, N. Godman and S. Latré.

## Workshop Papers, Tutorials & Demonstrations

9. **Recommender Systems through the Lens of Decision Theory.** WWW '21  
F. Vasile, D. Rohde, O. Jeunen, A. Benhalloum and O. Sakhi. (Tutorial)
10. **An Empirical Evaluation of Doubly Robust Learning for Recommendation.** REVEAL '20  
O. Jeunen and B. Goethals. (ACM RecSys Workshop)
11. **A Gentle Introduction to Recommendation as Counterfactual Policy Learning.** ACM UMAP '20  
F. Vasile, D. Rohde, O. Jeunen and A. Benhalloum. (Tutorial)
12. **Three Methods for Training on Bandit Feedback.** CausalML '19  
D. Mykhaylov, D. Rohde, F. Vasile, M. Bompaire and O. Jeunen. (NeurIPS Workshop)
13. **Learning from Bandit Feedback: An Overview of the State-of-the-art.** REVEAL '19  
O. Jeunen, D. Mykhaylov, D. Rohde, F. Vasile, A. Gilotte and M. Bompaire. (ACM RecSys Workshop)
14. **On the Value of Bandit Feedback for Offline Recommender System Evaluation.** REVEAL '19  
O. Jeunen, D. Rohde and F. Vasile. (ACM RecSys Workshop)
15. **Interactive Evaluation of Recommender Systems with SNIPER - An Episode Mining Approach.** ACM RecSys '19  
S. Moens, O. Jeunen and B. Goethals. (Demo)
16. **Predicting Sequential User Behaviour with Session-based Recurrent Neural Networks.** WSDM Cup '19  
O. Jeunen and B. Goethals. (ACM WSDM Workshop)
17. **Fair Offline Evaluation Methodologies for Implicit-Feedback Recommender Systems with MNAR Data.** REVEAL '18  
O. Jeunen, K. Verstrepren and B. Goethals. (ACM RecSys Workshop)

## Graduate Theses

1. **Offline Approaches to Recommendation with Online Success.** Ph.D. in Computer Science – 2021  
Promotor: Prof. Dr. Bart Goethals. (To be defended)  
Jury: Prof. Dr's Toon Calders, Maarten de Rijke, Floris Geerts, Thorsten Joachims and Mounia Lalmas.
2. **Data-Driven Frequency Planning in IEEE 802.11 Networks.** M.Sc. in Computer Science – 2017  
Promotor: Prof. Dr. Steven Latré. (Summa cum laude)