# Olivier JEUNEN

**Doctoral Researcher at the University of Antwerp**

LinkedIn · Twitter · GitHub · Google Scholar
Personal Website · olivierjeunen@gmail.com · Antwerp, Belgium


*I'm a researcher 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

| | | |
|---|---|---|
| Present<br>October 2017 | **Doctoral Researcher** (Expected Graduation: September 2021)<br>Research focused on implicit-feedback recommender systems and their evaluation. | University of Antwerp, Belgium |
| August 2021<br>June 2021 | **Research Scientist Intern** (Remote due to COVID-19)<br>Research centred around causal inference for machine learning and information retrieval. | Spotify, London, United Kingdom |
| November 2020<br>September 2020 | **Researcher – Software Engineer Intern** (Remote due to COVID-19)<br>Research centred around uncertainty estimation for causal models in computational advertising. | Facebook, London, United Kingdom |
| September 2019<br>June 2019 | **Research Scientist Intern**<br>Research centred around applications of counterfactual inference for recommender systems. | Criteo AI Lab, Paris, France |
| August 2017 | **Data Scientist**<br>Back-end development for a real-time recommendation architecture. | Froomle, Antwerp, Belgium |
| June 2017<br>July 2016 | **Data Scientist & Research Intern**<br>Research on distributed learning for computational advertising. | PrediCube, Antwerp, Belgium |
| June 2017<br>September 2015 | **Data Scientist & Research Intern**<br>Internships, student jobs and MSc thesis focused on machine learning applications with IoT data. | Technicolor, Antwerp, Belgium |
| September 2014<br>August 2011 | **Student Jobs**<br>Grill employee, brewery employee, IT department employee, Software Analyst, … | Various, Belgium |

## Education

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

| | |
|---|---|
| **Criteo's RecoGym Challenge '20** | Led 1st place team (3.000 EUR) |
| **ACM RecSys '19** | Doctoral Symposium |
| **ACM RecSys '19** | SIGCHI Travel Grant (1.500 USD) |
| **ACM WSDM Cup '19** | 5th place out of 386 teams |

## Professional Service

| | |
|---|---|
| **Program Committee** | ACM Conference on Recommender Systems (**RecSys '21**) |
| **Journal Reviewer** | ACM Transactions on Information Systems (**ToIS**) |
| | IEEE Transactions on Knowledge & Data Engineering (**TKDE**) |
| | Manning Publications Co. |
| **Co-organiser** | Dutch-Belgian Information Retrieval Workshop (**DIR '20**) |
| | Antwerp Shool of AI Meetup on Recommendation and Personalisation |
| **Member** | Association for Computing Machinery (**ACM**) Special Interest Groups (**SIG**) on: |
| | Computer-Human Interaction (**CHI**), Information Retrieval (**IR**), Knowledge Discovery & Data Mining (**KDD**) |

## Teaching & Invited Talks (excluding conference & poster presentations)

| | |
|---|---|
| 2019 - Present | **Artificial Intelligence Project** (University of Antwerp, MSc Computer Science) |
| 2017 - Present | **Supervisor and jury member for research theses** (University of Antwerp, MSc Computer Science) |
| Apr. 2021 | **Recommender Systems through the Lens of Decision Theory** (The 30th Web Conference (WWW '21), Online) |
| Dec. 2020 | **Joint Policy-Value Learning for Recommendation** (Dutch-Belgian Information Retrieval Workshop (DIR '20), Online) |
| Aug. 2020 | **Joint Policy-Value Learning for Recommendation** (A.I. Socratic Circles: Machine Learning Explained Seminars, Online) |
| July 2020 | **A Gentle Introduction to Recommendation as Counterfactual Policy Learning** (ACM Conference on User Modeling, Adaptation and Personalization (UMAP '20), Online) |
| Feb. 2020 | **Counterfactual Policy Learning for Recommendation** (Spring Workshop on Mining and Learning (SMiLe '20), Saigerhöh, Germany) |
| Dec. 2019 | **Counterfactual Policy Learning for Recommendation** (Dutch-Belgian DataBase Day (DBDBD '19), 's Hertogenbosch, Netherlands) |
| Nov. 2019 | **Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments** (Dutch-Belgian Information Retrieval Workshop (DIR '19), Amsterdam, Netherlands) |
| Nov. 2019 | **Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems** (Information Retrieval Seminars, University of Glasgow, UK) |
| Sept. 2019 | **Counterfactual Policy Learning for Recommendation** (Data Science Meetups, Leuven, Belgium) |
| Sept. 2019 | **Bandit Feedback and Likelihood Models for Recommendation** (ACM Summer School on Recommender Systems, Gothenburg, Sweden) |
| June 2019 | **Neural Networks and Causal Recommendation** (Data Science Summer School (DS3 '19), École Polytechnique, Paris, France) |
| 2017 - 2019 | **Project Data Science** (University of Antwerp, MSc Computer Science) |

## Open-Source Projects

| | | |
|---|---|---|
| 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 – Application Pending in Brazil, China and Europe.*

## Peer-Reviewed Academic Publications

### Journals

1. Embarrassingly Shallow Auto-Encoders for Dynamic Collaborative Filtering.
   **O. Jeunen**, J. Van Balen and B. Goethals. 2021.
   *Under review by* **UMUAI** *Special Issue on Dynamic Recommender Systems and User Modelling.*

### Conferences

2. Uncertainty-Aware Reward Modelling for Off-Policy Learning in Recommendation.
   **O. Jeunen** and B. Goethals. 2021. *Under double-blind review.*

3. Closed-Form Models for Collaborative Filtering with Side-Information. — ACM RecSys '20 (Late-Breaking-Result)
   **O. Jeunen**, J. Van Balen and B. Goethals.

4. Joint Policy-Value Learning for Recommendation. — ACM SIGKDD '20
   **O. Jeunen**, D. Rohde, F. Vasile and M. Bompaire.

5. Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments. — ACM RecSys '19
   **O. Jeunen**, K. Verstrepen and B. Goethals.

6. Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems. — ACM RecSys '19 (Doctoral Symposium)
   **O. Jeunen**.

7. 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.

### Workshops, Tutorials & Demos

8. Recommender Systems through the Lens of Decision Theory. — WWW '21 (Tutorial)
   F. Vasile, D. Rohde, **O. Jeunen**, A. Benhalloum and O. Sakhi.

9. An Empirical Evaluation of Doubly Robust Learning for Recommendation. — REVEAL '20 (ACM RecSys Workshop)
   **O. Jeunen** and B. Goethals.

10. A Gentle Introduction to Recommendation as Counterfactual Policy Learning. — ACM UMAP '20 (Tutorial)
    F. Vasile, D. Rohde, **O. Jeunen** and A. Benhalloum.

11. Three Methods for Training on Bandit Feedback. — CausalML '19 (NeurIPS Workshop)
    D. Mykhaylov, D. Rohde, F. Vasile, M. Bompaire and **O. Jeunen**.

12. Learning from Bandit Feedback: An Overview of the State-of-the-art. — REVEAL '19 (ACM RecSys Workshop)
    **O. Jeunen**, D. Mykhaylov, D. Rohde, F. Vasile, A. Gilotte and M. Bompaire.

13. On the Value of Bandit Feedback for Offline Recommender System Evaluation. — REVEAL '19 (ACM RecSys Workshop)
    **O. Jeunen**, D. Rohde and F. Vasile.

14. Interactive Evaluation of Recommender Systems with SNIPER - An Episode Mining Approach. — ACM RecSys '19 (Demo)
    S. Moens, **O. Jeunen** and B. Goethals.

15. Predicting Sequential User Behaviour with Session-based Recurrent Neural Networks. — WSDM Cup '19 (ACM WSDM Workshop)
    **O. Jeunen** and B. Goethals.

16. Fair Offline Evaluation Methodologies for Implicit-Feedback Recommender Systems with MNAR Data. — REVEAL '18 (ACM RecSys Workshop)
    **O. Jeunen**, K. Verstrepen and B. Goethals.

### Graduate Theses

1. Offline Approaches to Recommendation with Online Success. — Ph.D. in Computer Science – 2021 (To be conferred)
   **Promotor**: Prof. Dr. Bart Goethals.

2. Data-Driven Frequency Planning in IEEE 802.11 Networks. — M.Sc. in Computer Science – 2017 (Summa cum laude)
   **Promotor**: Prof. Dr. Steven Latré.