

# Olivier JEUNEN

## PhD Candidate @ University of Antwerp

### Machine Learning & Recommender Systems

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🌐 [olivierjeunen.github.io](https://olivierjeunen.github.io) @ [olivierjeunen@gmail.com](mailto:olivierjeunen@gmail.com) 📍 Antwerp, Belgium  
i Born the 5th of May 1995 (25 years old) in Antwerp, Belgium



Pre-doctoral researcher in the Adrem Data Lab at the University of Antwerp, supervised by Prof. Dr. Bart Goethals. My main line of research is centred around (implicit-feedback) recommender systems, ranging from algorithms to evaluation. Recently, my interests have been focusing on applications of causal and counterfactual inference to recommendation.

## SKILLS AND INTERESTS

|                    |  |
|--------------------|--|
| Programming        | C, C++, Java, Python   |
| Scripting          | CSS, Javascript, HTML, $\LaTeX$ , PHP, R, SQL  |
| Frameworks         | D3, Hadoop, Hive, Keras, Numpy, Pandas, Scipy, Scikit-Learn, Spark, PyTorch  |
| Web Services       | Amazon Web Services, Google Cloud, Microsoft Azure   |
| Research Interests | Counterfactual and causal inference, data mining, deep learning, information retrieval, machine learning, natural language processing, recommender systems, reinforcement learning |

## PROFESSIONAL EXPERIENCE

|                                 |  |
|---------------------------------|--|
| Present<br>October 2017         | PhD Candidate, UNIVERSITY OF ANTWERP, Belgium<br>Research focused on implicit-feedback recommender systems and their evaluation.   |
| November 2020<br>September 2020 | Research Scientist Intern, FACEBOOK, London, UK (Remote due to COVID-19)<br>Research centred around applications of causal and counterfactual inference for advertising.                           |
| August 2020<br>May 2020         | Research Scientist Intern, PANDORA + SIRIUSXM, Oakland, CA, USA (Delayed due to COVID-19)<br>Research centred around applications of causal and counterfactual inference for music recommendation. |
| September 2019<br>June 2019     | Research Scientist Intern, CRITEO AI LAB, Paris, France<br>Research centred around applications of causal and counterfactual inference for recommendation.   |
| August 2017                     | Data Scientist, FROOMLE, Antwerp, Belgium<br>Back-end development for a real-time recommendation architecture.   |
| June 2017<br>July 2016          | Data Scientist & Research Intern, PREDICUBE, Antwerp, Belgium<br>Research and back-end development of a distributed predictive modelling pipeline in Spark.  |
| June 2017<br>September 2015     | Data Scientist & Research Intern, TECHNICOLOR, Antwerp, Belgium<br>Internships, student jobs and MSc thesis focused on machine learning applications with IoT data.                                |
| September 2014                  | Software Analyst, DUVEL MOORTGAT, Antwerp, Belgium<br>Student job analysing requirements for a new Customer-Relationship-Management system.  |
| September 2013<br>August 2011   | Student Jobs, VARIOUS, Belgium<br>Grill employee, brewery employee, IT department employee, ...  |

## EDUCATION

|                 |  |
|-----------------|--|
| 2017 - Present  | PhD in Computer Science, University of Antwerp (expected graduation: September 2021)   |
| Sept. 2019      | ACM Summer School on Recommender Systems (Gothenburg, Sweden)                          |
| 2015 - 2017     | MSc Computer Science: Data Science & Research, University of Antwerp (magna cum laude) |
| Jan. - May 2015 | Erasmus exchange programme, University of Edinburgh (UK)                               |
| 2012 - 2016     | BSc Computer Science, University of Antwerp (cum laude)                                |
| 2006 - 2012     | High School Diploma: Latin - Mathematics (option extra mathematics)                    |

## TEACHING & INVITED TALKS (EXCLUDING CONFERENCE PRESENTATIONS)

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|----------------|---|
| 2019 - Present | <b>Artificial Intelligence Project</b> (University of Antwerp, MSc Computer Science)  |
| 2017 - Present | <b>Supervisor and jury member for research theses</b> (University of Antwerp, MSc Computer Science)   |
| July 2020      | <b>A Gentle Introduction to Recommendation as Counterfactual Policy Learning</b><br>(ACM Conference on User Modeling, Adaptation and Personalization (UMAP), Online)        |
| Feb. 2020      | <b>Counterfactual Policy Learning for Recommendation</b><br>(Spring Workshop on Mining and Learning (SMiLe), Saigerhöf, Germany)  |
| Dec. 2019      | <b>Counterfactual Policy Learning for Recommendation</b><br>(Dutch-Belgian DataBase Day (DBDBD), 's Hertogenbosch, Netherlands)   |
| Nov. 2019      | <b>Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments</b><br>(Dutch-Belgian Information Retrieval workshop (DIR), Amsterdam, Netherlands) |
| Nov. 2019      | <b>Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems</b><br>(Information Retrieval Seminars, University of Glasgow, UK)                               |
| Sept. 2019     | <b>Counterfactual Policy Learning for Recommendation</b><br>(Data Science Meetups, Leuven, Belgium)   |
| Sept. 2019     | <b>Bandit Feedback and Likelihood Models for Recommendation</b><br>(ACM Summer School on Recommender Systems, Gothenburg, Sweden)   |
| June 2019      | <b>Neural Networks and Causal Recommendation</b><br>(Data Science Summer School, École Polytechnique, Paris, France)  |
| 2017 - 2019    | <b>Project Data Science</b> (University of Antwerp, MSc Computer Science)   |

## PROFESSIONAL SERVICE

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|-------------------------|---------------------------|
| <b>Journal Reviewer</b> | ACM ToIS, IEEE TKDE       |
| <b>Member</b>           | ACM SIGCHI, SIGIR, SIGKDD |

## LANGUAGES

|         |           |
|---------|-----------|
| Dutch   | ● ● ● ● ● |
| English | ● ● ● ● ● |
| French  | ● ● ● ○ ○ |
| German  | ● ○ ○ ○ ○ |

## HONOURS

- > 1st place in Criteo's RecoGym Challenge '20
- > Doctoral Symposium at ACM RecSys '19
- > SIGCHI Travel Grant for ACM RecSys '19

## STRENGTHS

- > Passionate about data
- > Motivated and eager-to-learn
- > Autonomous and critical
- > Creative and effective

## PROJECTS

### RECOGYM

JUNE 2019

 [github.com/criteo-research/reco-gym](https://github.com/criteo-research/reco-gym)

A Reinforcement Learning Environment for the problem of Product Recommendation in Online Advertising  
Ongoing project by Criteo AI Lab.

Recommender Systems   Reinforcement Learning   Evaluation

### WSDM CUP: SPOTIFY SEQUENTIAL SKIP PREDICTION

JANUARY 2019

 CrowdAI    Workshop Paper    [github.com/olivierjeunen/sequential-skip-prediction](https://github.com/olivierjeunen/sequential-skip-prediction)

CrowdAI research competition, 5th place out of 386 teams, top 2%.

Predictive modelling of user interaction behaviour with recommended music.

Personalisation   Recommender Systems   Neural Networks

### VARIOUS KAGGLE COMPETITIONS

2017-2018

 Kaggle

Various research competitions, top 2 - 4%.

Natural Language Processing   Recommender Systems   Neural Networks

## PATENTS

O. Jeunen, E. Zeljkovic, P. Bosch, K. Van Doorselaer, N. Godman. June 2017. **A Method for Allocating Frequency Channels to a Plurality of Neighbouring Access Points.** eu 17305724.1 – 1875

1. **Closed-Form Models for Collaborative Filtering with Side-Information.**  
O. Jeunen, J. Van Balen and B. Goethals. 2020. **RecSys'20** (Late-Breaking-Result)
2. **Joint Policy-Value Learning for Recommendation.**  
O. Jeunen, D. Rohde, F. Vasile and M. Bompaire. 2020. **KDD'20**
3. **A Gentle Introduction to Recommendation as Counterfactual Policy Learning.**  
F. Vasile, D. Rohde, O. Jeunen and A. Benhalloum. 2020. **UMAP'20** (Tutorial)
4. **Three Methods for Training on Bandit Feedback.**  
D. Mykhaylov, D. Rohde, F. Vasile, M. Bompaire and O. Jeunen. **CausalML'19** (NeurIPS Workshop)
5. **Learning from Bandit Feedback: An Overview of the State-of-the-art.**  
O. Jeunen, D. Mykhaylov, D. Rohde, F. Vasile, A. Gilotte and M. Bompaire. **REVEAL'19** (RecSys Workshop)
6. **On the Value of Bandit Feedback for Offline Recommender System Evaluation.**  
O. Jeunen, D. Rohde and F. Vasile. **REVEAL'19** (RecSys Workshop)
7. **Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments.**  
O. Jeunen, K. Verstrepen, B. Goethals. **RecSys'19**
8. **Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems.**  
O. Jeunen. **RecSys'19** (Doctoral Symposium)
9. **Interactive Evaluation of Recommender Systems with SNIPER - An Episode Mining Approach.**  
S. Moens, O. Jeunen, B. Goethals. **RecSys'19** (Demo)
10. **Predicting Sequential User Behaviour with Session-based Recurrent Neural Networks.**  
O. Jeunen, B. Goethals. **WSDM Cup'19** (WSDM Workshop)
11. **A Machine Learning Approach for IEEE 802.11 Channel Allocation.**  
O. Jeunen, P. Bosch, M. Van Herwegen, K. Van Doorselaer, N. Godman, S. Latré. **CNSM'18**
12. **Fair Offline Evaluation Methodologies for Implicit-Feedback Recommender Systems with MNAR Data.**  
O. Jeunen, K. Verstrepen, B. Goethals. **REVEAL'18** (RecSys Workshop)

## “ REFERENCES

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**Bart Goethals**

*Full Professor, UNIVERSITY OF ANTWERP*

@ bart.goethals@uantwerp.be

**Flavian Vasile**

*Solution Architect, CRITEO AI LAB*

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