Olivier JEUNEN

Doctoral Researcher @ University of Antwerp

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

Education

2017 - Present	**Doctor of Science in Computer Science (PhD)** University of Antwerp, Belgium. (Expected graduation: September 2021)
Sept. 2019	**ACM Summer School on Recommender Systems** University of Gothenburg, Sweden.
2015 - 2017	**Master of Science in Computer Science: Data Science & Research (MSc)** University of Antwerp, Belgium (Magna cum laude, with great distinction)
Jan. - May 2015	**Erasmus Exchange programme** University of Edinburgh, United Kingdom.
2012 - 2016	**Bachelor of Science in Computer Science (BSc)** University of Antwerp, Belgium. (Cum laude, with distinction)
2006 - 2012	**High School Diploma: Latin – Mathematics** Moretus-Ekeren, Belgium. (Optional surplus mathematics)

Technical Skills and Research Interests

Programming	C, **C++**, Java, **Python**
Scripting	CSS, Javascript, HTML, LaTeX, PHP, R, **SQL**
Frameworks	Hive, **Keras**, **Numpy**, **Pandas**, **PyTorch**, **Scipy**, **Scikit-Learn**, Spark, Tensorflow
Research Focus	**Counterfactual and causal inference**, **information retrieval**, **machine learning**, **recommender systems**, reinforcement learning

Languages

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

Honours

- Led 1st place team in Criteo's RecoGym Challenge '20 (3.000 EUR)
- Doctoral Symposium at ACM RecSys '19
- SIGCHI Travel Grant for ACM RecSys '19 (1.500 USD)
- 5th place ACM WSDM Cup '19

Professional Service

Program Committee	ACM Conference on Recommender Systems (**RecSys '21**)
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 Meetups
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), Slovenia / 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 — June 2019

GitHub Blogpost
Ongoing project by Criteo AI Lab.

Recommender Systems | Reinforcement Learning | Evaluation

WSDM Cup: Spotify Sequential Skip Prediction — January 2019

CrowdAI Workshop Paper GitHub
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 on click-through-rate prediction, text classification, … Top 2 - 4%.

Natural Language Processing | Recommender Systems | Neural Networks

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:
   Unifying Policy- and Value-based Approaches to Recommendation. — WWW '21 (Tutorial)
   F. Vasile, D. Rohde, **O. Jeunen**, A. Benhalloum and O. Sakhi. 2021.
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. 2020.
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 (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.