OLIVIER JEUNEN

Edinburgh, United Kingdom
Google Scholar ◇ GitHub ◇ LinkedIn ◇ olivierjeunen.github.io ◇ olivierjeunen@gmail.com
Last updated: September 2023

PROFESSIONAL EXPERIENCE

ShareChat December 2022 – Present
Lead Applied Scientist *Edinburgh, United Kingdom*
Research centred around recommendation, measurement, experimentation, and optimisation.

Amazon December 2021 – November 2022
Postdoctoral Scientist *Edinburgh, United Kingdom*
"Early-Career Scientist" Programme, researching machine learning and causal inference in advertising.

Spotify June 2021 – August 2021
Research Scientist Intern *London, United Kingdom*
Research centred around the intersection of causal inference and machine learning.

Facebook (Meta) September 2020 – November 2020
Research Engineer Intern *London, United Kingdom*
Research centred around uncertainty estimation for causal models in computational advertising.

Criteo AI Lab June 2019 – September 2019
Research Scientist Intern *Paris, France*
Research centred around applications of counterfactual inference for recommender systems.

University of Antwerp October 2017 – November 2021
(Pre-/Post-)Doctoral Research Scientist *Antwerp, Belgium*
Research focused on implicit-feedback recommender systems and their evaluation in the Adrem Data Lab.

Froomle *(University of Antwerp spin-off)* August 2017
Data Scientist *Antwerp, Belgium*
Back-end development for a real-time recommendation architecture.

PrediCube *(University of Antwerp spin-off)* July 2016 – June 2017
Data Scientist & Research Intern *Antwerp, Belgium*
Research on distributed learning for computational advertising.

Technicolor September 2015 – June 2017
Data Scientist & Research Intern *Antwerp, Belgium*
Research internships, student jobs and M.Sc. thesis focused on machine learning applications with IoT data.

EDUCATION

University of Antwerp, Belgium

Ph.D. in Computer Science	Thesis: *Offline Approaches to Recommendation with Online Success*		*2017 – 2021*
M.Sc. in Computer Science	Minor: Data Science & Research	*Magna cum laude*	*2015 – 2017*
B.Sc. in Computer Science		*Cum laude*	*2012 – 2016*
Erasmus exchange semester	**University of Edinburgh, United Kingdom**		*Jan.–June 2015*
High School: Moretus, Belgium	Latin–Mathematics (option extra mathematics)		*2006 – 2012*

TECHNICAL SKILLS & RESEARCH INTERESTS

Programming	C, C++, Java, Python, SQL
Frameworks	Apache Hive, Numpy, Pandas, PyTorch, Scipy, Scikit-Learn, Apache Spark, Tensorflow
Research Focus	Causality, contextual bandits, information retrieval, machine learning, recommender systems
Languages Spoken	English, Dutch, French (basic)

HONOURS, AWARDS & ACHIEVEMENTS

AdKDD workshop at KDD '22	Best Paper Award
RecSys '21 – '22	Outstanding Reviewer Awards
RecSys '21	Best Student Paper Award
WWW '21	Student Scholarship Award
RecSys '19	SIGCHI Travel Grant
Criteo's RecoGym Challenge 2020	Led a team of MSc students to 1st place

PROFESSIONAL SERVICE

Organising Committee Dutch-Belgian Information Retrieval Workshop (**DIR** '20), ACM **RecSys** '22—'23 Web Chair, **ECIR** '24 Industry Day Chair, RecSys Workshops: CONSEQUENCES '22–'23

Program Committee ACM **RecSys** '21—'23, **WSDM** '22—'24, **WWW** '22, **SIGKDD** '22—'23, **SIGIR** '23, **CIKM** '23. RecSys Workshops: ORSUM '21—'23, PERSPECTIVES '23, NORMalize '23, LERI '23, Challenge '23. KDD Workshops: EvalRS '23

Reviewer ACM Transactions on Information Systems (**ToIS**), Transactions on Recommender Systems (**ToRS**), IEEE Transactions on Knowledge & Data Engineering (**TKDE**), Springer Data Mining and Knowledge Discovery (**DAMI**), Machine Learning (**ML**), **CHI** '23

TEACHING & TUTORIALS

May '23	**Practical Bandits: An Industry Perspective**	*WWW '23, TX, USA*
Apr. '21	**Recommender Systems through the Lens of Decision Theory**	*WWW '21, Online*
July '20	**A Gentle Introduction to Recommendation as Counterfactual Policy Learning**	*UMAP '20, Online*
Sep. '19	**Bandit Feedback and Likelihood Models for Recommendation**	*RecSys Summer School, SWE*
June '19	**Neural Networks and Causal Recommendation**	*Data Science Summer School, École Polytechnique, FR*
May '23	**Practical Bandits: An Industry Perspective**	*WWW '23, TX, USA*
'17–'21	**Research Thesis Supervisor and Jury Member**	*M.Sc. Computer Science, University of Antwerp, BE*
'17–'20	**Artificial Intelligence Project**	*M.Sc. Computer Science, University of Antwerp, BE*

(INVITED) TALKS, KEYNOTES & GUEST LECTURES

Aug. '23	**Off-Policy Learning to Bid with AuctionGym**	Tubi, USA, Online
July '23	**Pessimistic Decision-Making for Recommender Systems**	University of Glasgow, UK
Apr. '23	**Probabilistic Position Bias Models for Short-Video Recommendations**	ECIR '23 Industry Day, IE
Oct. '22	**Learning to Bid with AuctionGym**	Indeed, USA, Online
June '22	**Pessimistic Decision-Making for Recommendation**	PRS Workshop, Netflix, CA, USA
Apr. '22	**Machine Learning Challenges in Advertising at Amazon**	*Guest Lecture* at University of Antwerp, BE
Apr. '22	**Advances in Bandit Learning for Recommendation**	Booking.com, NL, Online
Feb. '22	**Embarrassingly Shallow Auto-Encoders for Dynamic Collaborative Filtering**	DIR '21, NL, Online
Nov. '21	**Advances in Bandit Learning for Recommendation**	RMIT University, AUS, Online
Oct. '21	**The Quest for Recommendations with Online Success**	**Keynote**: ORSUM Workshop at RecSys '21, NL
Sept. '21	**Advances in Bandit Learning for Recommendation**	University of Amsterdam, NL
Aug. '21	**Pessimistic Reward Models for Off-Policy Learning in Recommendation**	Spotify, UK & USA, Online
July '21	**Realigning Offline Objectives with Online Success**	Farfetch, PT, Online
Mar. '21	**Recommender Systems as (Offline) Bandit Learning**	Cornell University, USA, Online
Dec. '20	**Joint Policy-Value Learning for Recommendation**	DIR '20, BE, Online
Aug. '20	**Joint Policy-Value Learning for Recommendation**	AISC "ML Explained" Seminars, CAN, Online
Feb. '20	**Counterfactual Policy Learning for Recommendation**	SMiLe '20, DE
Dec. '19	**Counterfactual Policy Learning for Recommendation**	DBDBD '19, NL
Nov. '19	**Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments**	DIR '19, NL
Nov. '19	**Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems**	Uni. of Glasgow, UK

Sept. '19 **Counterfactual Policy Learning for Recommendation** Data Science Meetups, BE

Dec. '21 **Episode 3: Olivier Jeunen** "Recsperts: Recommender Systems Experts" podcast series.

OPEN-SOURCE PROJECTS

AuctionGym	A Reinforcement Learning Simulator for Online Advertising	**GitHub:** amzn/auction-gym/
RecoGym	A Reinforcement Learning Simulator for Recommender Systems	**GitHub:** criteo-research/reco-gym/
Various	Implementations of published algorithms & methods	**GitHub:** olivierjeunen

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.

PEER-REVIEWED ACADEMIC PUBLICATIONS

Journal Articles

1. Scheduling on a Budget: Avoiding Stale Recommendations with Timely Updates. Elsevier MLWA, 2023
   R. Verachtert, **O. Jeunen** and B. Goethals.
2. Pessimistic Decision-Making for Recommender Systems. ACM ToRS, 2022
   O. Jeunen and B. Goethals.
   Special Issue on Highlights of RecSys '21
3. Embarrassingly Shallow Auto-Encoders for Dynamic Collaborative Filtering. Springer UMUAI. 2022
   O. Jeunen, J. Van Balen and B. Goethals.
   Special Issue on Dynamic Recommender Systems and User Modelling (DyRSUM)

Conference Papers

4. A Probabilistic Position Bias Model for Short-Video Recommendation Feeds.
   O. Jeunen. RecSys '23
5. Off-Policy Learning to Bid with AuctionGym.
   O. Jeunen, S. Murphy and B. Allison. KDD '23
6. Disentangling Causal Effects from Sets of Interventions in the Presence of Unobserved Confounders.
   O. Jeunen, C. M. Gilligan-Lee, R. Mehrotra and M. Lalmas. NeurIPS '22
7. Pessimistic Reward Models for Off-Policy Learning in Recommendation.
   O. Jeunen and B. Goethals. 🏆 *Best Student Paper Award* at RecSys '21
8. Top-K Contextual Bandits with Equity of Exposure.
   O. Jeunen and B. Goethals. RecSys '21
9. Closed-Form Models for Collaborative Filtering with Side-Information.
   O. Jeunen, J. Van Balen and B. Goethals. RecSys '20
10. Joint Policy-Value Learning for Recommendation.
    O. Jeunen, D. Rohde, F. Vasile and M. Bompaire. KDD '20
11. Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments.
    O. Jeunen, K. Verstrepen and B. Goethals. RecSys '19
12. Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems.
    O. Jeunen. RecSys '19
13. A Machine Learning Approach for IEEE 802.11 Channel Allocation.
    O. Jeunen, P. Bosch, M. Van Herwegen, K. Van Doorselaer, N. Godman and S. Latré. CNSM '18

Workshop Papers

14. A Common Misassumption in Online Experiments with Machine Learning Models. PERSPECTIVES '23
O. Jeunen. *Co-located with RecSys*

15. Offline Recommender System Evaluation under Unobserved Confounding. CONSEQUENCES '23
O. Jeunen and B. London. *Co-located with RecSys*

16. Ad-load Balancing via Off-policy Learning in a Content Marketplace. CONSEQUENCES '23
H. Sagtani, M. G. Jhawar, R. Mehrotra and **O. Jeunen**. *Co-located with RecSys*

17. A Probabilistic Position Bias Model for Short-Video Feeds. ML4SM '23
O. Jeunen. *Co-located with WWW*

18. A Probabilistic Framework to Learn Auction Mechanisms via Gradient Descent. AI4WebAds '23
O. Jeunen, L. Stavrogiannis, A. Sayedi and B. Allison. *Co-located with AAAI*

19. Learning to Bid with AuctionGym. 🏆 *Best Paper Award* at AdKDD '22
O. Jeunen, S. Murphy and B. Allison. *Co-located with KDD*

20. Disentangling Causal Effects from Sets of Interventions in the Presence of Unobserved Confounders. WHY '21
O. Jeunen, C. M. Gilligan-Lee, R. Mehrotra and M. Lalmas. *Co-located with NeurIPS*

21. Offline Evaluation of Reward-Optimizing Recommender Systems: The Case of Simulation. SimuRec '21
I. Aouali, A. Benhalloum, M. Bompaire, B. Heymann, **O. Jeunen**, D. Rohde, O. Sakhi and F. Vasile. *(RecSys)*

22. An Empirical Evaluation of Doubly Robust Learning for Recommendation. REVEAL '20
O. Jeunen and B. Goethals. *Co-located with RecSys*

23. Three Methods for Training on Bandit Feedback. CausalML '19
D. Mykhaylov, D. Rohde, F. Vasile, M. Bompaire and **O. Jeunen**. *Co-located with NeurIPS*

24. 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. *Co-located with RecSys*

25. On the Value of Bandit Feedback for Offline Recommender System Evaluation. REVEAL '19
O. Jeunen, D. Rohde and F. Vasile. *Co-located with RecSys*

26. Predicting Sequential User Behaviour with Session-based Recurrent Neural Networks. WSDM Cup '19
O. Jeunen and B. Goethals. *Co-located with WSDM*

27. Fair Offline Evaluation Methodologies for Implicit-Feedback Recommender Systems with MNAR Data.
O. Jeunen, K. Verstrepen and B. Goethals. REVEAL '18, *Co-located with RecSys*

Tutorials

28. Practical Bandits: An Industry Perspective. WWW '23
B. van den Akker, **O. Jeunen**, Y. Li, B. London, Z. Nazari and D. Parekh.

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

30. A Gentle Introduction to Recommendation as Counterfactual Policy Learning. UMAP '20
F. Vasile, D. Rohde, **O. Jeunen** and A. Benhalloum.

Demonstrations

31. Interactive Evaluation of Recommender Systems with SNIPER – An Episode Mining Approach. RecSys '19
S. Moens, **O. Jeunen** and B. Goethals.

Workshop Proposals

32. CONSEQUENCES – Causality, Counteractuals & Sequential Decision-Making for Recommender Systems.
O. Jeunen, T. Joachims, H. Oosterhuis, Y. Saito, F. Vasile and Y. Wang. RecSys '23

33. CONSEQUENCES – Causality, Counteractuals & Sequential Decision-Making for Recommender Systems.
O. Jeunen, T. Joachims, H. Oosterhuis, Y. Saito and F. Vasile. RecSys '22

Preprints

34. On (Normalised) Discounted Cumulative Gain as an Offline Evaluation Metric for Top-n Recommendation.
O. Jeunen, I. Potapov and A. Ustimenko.

35. RecFusion: A Binomial Diffusion Process for 1D Data for Recommendation.
G. Bénédict, **O. Jeunen**, S. Papa, S. Barghav, D. Odijk and M. de Rijke.

Graduate Theses

1. Offline Approaches to Recommendation with Online Success. Ph.D. in Computer Science – 2021
Promotor: prof. dr. Bart Goethals.
Committee: prof. drs. 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*