Martin Saveski

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Research Interests

Computational Social Science, Causal inference, Social Network Analyses

Education

09/2014—08/2020   Ph.D., Media Arts and Sciences
Massachusetts Institute of Technology
- *Thesis*: Polarization and Toxicity in Political Discourse Online
- *Committee*: Deb Roy (advisor), Dean Eckles, Lada Adamic

09/2011—09/2013   M.Sc., Data Mining and Knowledge Management, Honors
University Pierre and Marie Curie & Polytechnic University of Catalonia
- *Thesis*: Cold Start Recommendations: A Non-negative Matrix Factorization Approach

09/2007—06/2010   B.Sc., Computing Science, First Class Honors
Staffordshire University
- *Thesis*: Automatic Wordnet Construction using Machine Translation and Language Modeling

Research Experience

Sep 2020—   *Stanford University*
Postdoc, Management Science & Engineering
- Working with Johan Ugander.

Jun—Aug 2019   *Facebook*
Core Data Science, Menlo Park (Internship)
- Identified and characterized users who bring people together through their posts.

Jun—Aug 2016   *LinkedIn*
Experimentation Team, Mountain View (Internship)
- Developed experimental designs for detecting network interference in randomized experiments.

May—Jul 2014   *Amazon*
Machine Learning Team, Berlin (Internship)
- Worked on algorithms for learning sparse ranking models.

Feb—Aug 2013   *Yahoo! Labs*
Social Media Engagement Group, Barcelona (Internship)
- Designed algorithms for cold-start recommendations.

Jun—Aug 2012   *Laboratory of Computer Sciences, Paris 6*
Machine Learning and Information Retrieval Research Team, Paris (Internship)
- Developed methods for blending generative and discriminative models for semi-supervised learning.

Jan—Aug 2011   *Jožef Stefan Institute*
Department of Knowledge Technologies, Ljubljana
- Built a system for sentiment analysis of financial tweets.

Publications

Citation statistics available on <u>Google Scholar</u>

* indicates equal contribution

1. Engaging Politically Diverse Audiences on Social Media [pdf]
    Martin Saveski, Doug Beeferman, David McClure, Deb Roy
    ICWSM'22: International AAAI Conference on Web and Social Media. 2022.

2. Perspective-taking to Reduce Affective Polarization on Social Media [pdf]
    Martin Saveski*, Nabeel Gillani*, Ann Yuan, Prashanth Vijayaraghavan, Deb Roy
    ICWSM'22: International AAAI Conference on Web and Social Media. 2022.

3. Counterfactual Evaluation of Peer-Review Assignment Strategies
    Martin Saveski, Nihar Shah, Johan Ugander
    CODE'21: Conference on Digital Experimentation. 2021.

4. The Structure of Toxic Conversations on Twitter [pdf]
    Martin Saveski, Brandon Roy, Deb Roy
    WWW'21: The Web Conference. 2021.

5. Social Catalysts: Characterizing People Who Spark Conversations Among Others [pdf]
    Martin Saveski, Farshad Kooti, Sylvia Morelli Vitousek, Carlos Diuk, Bryce Bartlett, Lada Adamic
    CSCW'21: Conference on Computer-Supported Cooperative Work and Social Computing. 2021.

6. Balanced Influence Maximization in the Presence of Homophily [pdf]
    Md Sanzeed Anwar, **Martin Saveski**, Deb Roy
    WSDM'21: International Conference on Web Search and Data Mining. 2021.

7. Algorithmic and Human Prediction of Success in Human Collaboration From Visual Features [pdf]
    Martin Saveski*, Edmond Awad*, Iyad Rahwan, Manuel Cebrian
    Nature Scientific Reports. 2021.

8. Testing for Arbitrary Interference on Experimentation Platforms [pdf]
    Jean Pouget-Abadie, Guillaume Saint-Jacques*, **Martin Saveski***, Weitao Duan, Souvik Ghosh, Ya Xu, Edo Airoldi
    Biometrika. 2019.

9. Me, My Echo Chamber, and I: Introspection on Social Media Polarization [pdf]
    Nabeel Gillani*, Ann Yuan*, **Martin Saveski**, Soroush Vosoughi, Deb Roy
    *WWW'18, International Conference on the World Wide Web. 2018. **(Honorable mention)***

10. Detecting Network Effects: Randomizing Over Randomized Experiments [pdf]
    Martin Saveski*, Jean Pouget-Abadie*, Guillaume Saint-Jacques, Weitao Duan, Souvik Ghosh, Ya Xu, Edo Airoldi
    KDD'17: International Conference on Knowledge Discovery and Data Mining. 2017. (Research Track)

11. Topic Modeling in Twitter: Aggregating Tweets by Conversations [pdf]
    David Alvarez-Melis*, **Martin Saveski***
    ICWSM'16: International AAAI Conference on Web and Social Media. 2016. (Short Paper)

12. Tracking the Yak: An Empirical Study of Yik Yak [pdf]
    Martin Saveski, Sophie Chou, Deb Roy
    ICWSM'16: International AAAI Conference on Web and Social Media. 2016. (Short Paper)

13. Human Atlas: A Tool for Mapping Social Networks [pdf]
    Martin Saveski, Eric Chu, Soroush Vosoughi, Deb Roy
    WWW'16: International Conference on the World Wide Web. 2016. (Demo)

14. One-Pass Ranking Models for Low-Latency Product Recommendations [pdf]
    Antonino Freno, **Martin Saveski**, Rodolphe Jenatton, Cédric Archambeau
    KDD'15: International Conference on Knowledge Discovery and Data Mining. 2015. (Industry Track)

15. Item Cold-Start Recommendations: Learning Local Collective Embeddings [pdf]
     Martin Saveski, Amin Mantrach
     RecSys'14, ACM Conference Series on Recommender Systems. 2014.

16. The Geography of Online News Engagement [pdf]
     Martin Saveski, Daniele Quercia, Amin Mantrach
     Socinfo'14: International Conference on Social Informatics. 2014.

17. Joint Semi-supervised Learning of Hidden Conditional Random Fields and Hidden Markov Models [pdf]
     Yann Soullard, **Martin Saveski**, Thierry Artières
     Pattern Recognition Letters. 2013.

18. Automatic Construction of Wordnets by Using Machine Translation and Language Modeling [pdf]
     Martin Saveski, Igor Trajkovski
     In Proceedings of Seventh Language Technologies Conference. 2010.

Awards

2021 *Best Reviewer*, ICWSM: AAAI International Conference on Web and Social Media

2019 *Best Reviewer*, ICWSM: AAAI International Conference on Web and Social Media

2018 *Paper Honorable Mention*, WWW: International Conference on the World Wide Web

2011—2013 *Scholarship*, European Union full scholarship for a two-year Master's Degree

2008—2010 *Scholarship*, Macedonian government scholarship for students with advanced achievements

Professional Service

2018—2021 *Program Committee*, ICWSM: AAAI International Conference on Web and Social Media

2021 *Program Committee*, WWW: The Web Conference

2017—2018 *Reviewer*, CSCW: Conference on Computer-Supported Cooperative Work and Social Computing

2018 *Reviewer*, Journal of the Royal Statistical Society, Series A (Statistics in Society)

2016 *Program Committee*, Bloomberg Data For Good Exchange

2016 *Reviewer*, ACM Transactions on Information Systems

2016 *Application Reviewer*, MIT Summer Research Program

2015 *Reviewer*, Elsevier Computer Communications, Special Issue on Online Social Networks

Mentorship

Jun'18—May'19 Sanzeed Anwar
MIT Undergraduate Research Opportunities Program
- Developed algorithms for balanced influence maximization in the presence of homophily, published at WSDM'21.

Feb—Dec 2016 Dominik Martinez
MIT Undergraduate Research Opportunities Program
- Worked on a tool for efficiently mapping social networks.

Jun—Aug 2015   Hayley Hinsberger
               MIT Summer Research Program
               • Studied the relationship between household characteristics and diffusion of microfinance using data
                 from Banerjee et al. (Science, 2013).

Teaching Experience

Fall 2016   *Machine Learning, Society & Autonomy, MIT*
            Teaching Assistant

Spring 2014   *Introduction to Social Machines: Building Systems Solutions for Social Change, MIT*
              Teaching Assistant

Selected Press Coverage

Aug 22, 2018   *MIT Tech Review*
               Technologists are trying to fix the "filter bubble" problem that tech helped create [link]

Apr 12, 2018   *NPR*
               Tech Creates Our Political Echo Chambers. It Might Also Be A Solution [link]

Mar 3, 2017   *New York Times*
              How to Escape Your Political Bubble for a Clearer View [link]

Feb 13, 2017   *Recode*
               This Chrome add-on lets you see Twitter through the eyes of other users [link]

Feb 8, 2017   *The Outline*
              MIT released a tool that uses real people's Twitter feeds to show you the "other side" [link]

Feb 7, 2017   *Mashable*
              MIT-designed Chrome extension fixes your Twitter filter bubble [link]

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