Martin Saveski

MIT Media Lab
75 Amherst Street
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Research Interests

Area Computational Social Science
Methods Social Network Analysis, Causal inference, Experimental Design, Machine Learning
Applications Information Diffusion, Conversation Analysis, Political Polarization

Education

2015— Ph.D., Media Arts and Sciences
Massachusetts Institute of Technology
- *Advisor*: Deb Roy
- *Thesis*: Polarization and Toxicity in Political Discourse Online
- *Thesis committee*: Deb Roy, Dean Eckles, Lada Adamic

2014—2015 M.Sc., Media Arts and Sciences, Fast-tracked
Massachusetts Institute of Technology

2011—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

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

Research Experience

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.

Jun—Aug 2014 *Amazon*
Machine Learning Team, Berlin (Internship)
- Worked on algorithms for sparsity-inducing learning-to-rank 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 on my Google Scholar profile

** indicates equal contribution*

1. 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.

2. Observational Causal Inference Using Network Information
   Yan Leng, **Martin Saveski**, Alex 'Sandy' Pentland, Dean Eckles
   NeurIPS'19, Workshop on Graph Representation Learning. 2019.

3. 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)***

4. 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)

5. 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)

6. 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)

7. 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)

8. 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)

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

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

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

12. Web Services for Stream Mining: A Stream-Based Active Learning Use Case [pdf]
    Martin Saveski, Miha Grčar
    ECML'11, Workshop on Planning to Learn and Service-Oriented Knowledge Discovery. 2011.

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

Professional Service

2018—2019 *Program Committee*, ICWSM: AAAI International Conference on Web and Social Media

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

2013 *Reviewer*, RecSys: ACM Conference on Recommender systems

Awards

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

2018 *Paper Honorable Mention*, WWW: ACM 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

Mentorship

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

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

Updated January 20, 2020 ∎