

Milad Eftekhari

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RESEARCH INTERESTS

- Online Advertising, Data Science, Machine Learning, Data Mining, Social Network Analysis, Big Data

PROFESSIONAL EXPERIENCE

- **Machine Learning Software Engineer**— Ads Quality Dept, Google Inc. Nov 2015 - present
 - **CTR prediction:** The goal is to identify the probability that a given user would click on a candidate ad for a specific query.
- **Research Assistant**— University of Toronto Sept 2009 - Sept 2015
 - **Twitter Firehose Analysis:** I analyzed billions of tweets and users' activities in real time to identify daily trends, information bursts, interest and expertise of users, influential entities, etc. I also developed techniques to increase revenue in social advertising. [Implemented in Java, JQuery]
- **Data Scientist Intern**— NovoED Inc. (online social learning) Spring 2015
 - **Churn Prediction:** I identified early warning signals to locate students who are expected to drop an online course, to fail, or not to take more courses in the platform. [MySQL, R]
- **Research Intern**— Microsoft Research Fall 2014
 - **Team Formation Dynamics:** By analyzing organic teams from NovoED's online courses, I identified students' preferences when they form teams and success factors in high performance teams, presented a model for team formation and proposed algorithms to form successful and stable teams. [MySQL, R]
 - Simultaneously a visiting research scientist at Social Algorithms Lab, **Management Science and Engineering Department, Stanford University**
- **Instructor**— CSC373: Design and Analysis of Algorithms, University of Toronto Summer 2013
- **Teaching Assistant**— CSC373, CSC343, CSC300, CSCB63, CSC165, CSC108, CSC104, SII199
- **System Programmer Intern**— IKCO (The largest car producer in the Middle East) Summer 2006
 - **Management Software Systems:** I designed and implemented a desktop project management system and an online intern management system for IKCO's Education department. [C#, ASP.NET, MSSQL]

EDUCATION

- **University of Toronto**—Toronto, ON
 - Ph.D. in Computer Science, Advisers: Prof. Yashar Ganjali and Prof. Nick Koudas* Sept 2009 - Nov 2015
 - Thesis: Analyzing the Role of Users' Interactions in Information Spread
- **Sharif University of Technology**—Tehran
 - M.Sc. in Computer Engineering - Software, GPA: 18.33/20, Adviser: Prof. M. Ghodsi* Sept 2007 - Aug 2009
 - Thesis: Game Theoretic approaches on diffusion of innovations in social networks
- **Sharif University of Technology**—Tehran
 - B.Sc. in Computer Engineering - Software, GPA: 17.48/20, Adviser: Prof. M. Ghodsi* Sept 2003 - Aug 2007
 - Thesis: Nash Equilibrium

RESEARCH AWARDS

- Doctoral Completion Award Sept 2013 - Aug 2014
- Bell Graduate Scholarship Sept 2013 - Aug 2014
- Ontario Graduate Scholarship (declined) Sept 2013 - Aug 2014

- Wolfond Fellowship Jan 2013 - Aug 2013
- Arts and Science Fellowship, University of Toronto Sept 2009 - Aug 2013

PUBLICATIONS

- **Milad Eftekhar**, Farnaz Ronaghi, Amin Saberi. "Team Formation Dynamics: A Study Using Online Learning Data", ACM COSN 2015
- **Milad Eftekhar**, Nick Koudas, and Yashar Ganjali. "Reaching a desired set of users via different paths: an online advertising technique on a micro-blogging platform", EDBT 2015
 - This paper has been identified by the EDBT PC chair as one the best papers submitted to the conference and invited to ACM Transactions on Database System by TODS Editor-in-Chief.
- **Milad Eftekhar**, Saravanan Thirumuruganathan, Gautam Das, and Nick Koudas. "Price trade-offs in Social Media Advertising", COSN 2014, 169-176.
- **Milad Eftekhar**, Yashar Ganjali, and Nick Koudas. "Information Cascade at Group Scale", SIGKDD 2013
- **Milad Eftekhar** and Nick Koudas. "Partitioning and Ranking Tagged Data Sources", PVLDB 6(4) 2013
- **Milad Eftekhar**, Nick Koudas, and Yashar Ganjali. "Bursty subgraphs in social networks", WSDM 2013
- Soheil Hasas Yeganeh, **Milad Eftekhar**, Yashar Ganjali, Ram Keralapura, and Antonio Nucci. "CUTE: traffic Classification Using TERms", ICCCN 2012, 1-9.
- Majid Yazdani, **Milad Eftekhar**, and Hassan Abolhassani. "Tree based Method for Classifying Websites Using Extended Hidden Markov Models". PAKDD 2009, 780-787.

INVITED PUBLICATIONS

- **Milad Eftekhar**. "Social Influence". To appear in Encyclopedia of Database Systems. 2nd ed. 2016.
- **Milad Eftekhar** and Nick Koudas. "Some Research Opportunities on Twitter Advertising". IEEE Data Engineering Bulletin 36(3): 77-82, 2013.

NOTABLE PROJECTS

- **Who Rated What? (KDD Cup Competition)**: I developed a software to predict what users rate what movies for Netflix user-movie dataset (SVD-based collaborative filtering). [Matlab, C++]
- **Facial Feature Classes**: I developed an image classification software based on facial features utilizing Multi Layer Perceptron with back propagation, Bayes Classification, MLE, k NN, and SVM. [Matlab]
- **Search Engine**: My system crawls wiki pages, creates an index, searches for queries, refines queries based on user's relevance feedback, and expand them using local and global analysis. [Lucene, Java]

RELEVANT SKILLS

- Strong knowledge of Data Mining, Machine Learning, Data Science, Game Theory, and Algorithms Design
- Proficient in Social Analysis and working with real large-scale datasets (e.g., terabytes of Twitter firehose)
- Excellent problem solving and analytical skills, passion for learning, challenge and innovation
- Excellent written and verbal communication skills (publications, presentations, teaching)
- Programming: Java, R, MySQL, Python, Weka, C#, ASP.NET, MSSQL, Web APIs, etc.
- OS: Windows and UNIX based systems

COMMUNITY SERVICE

- Administrator for the Computer Systems and Networking group's website at the University of Toronto, (<http://csng.cs.toronto.edu/index.php>), Sept 2013 - Aug 2014
- Mentor of two undergraduate summer interns, University of Toronto, Summer 2013
 - Seung Wook Kim: Seung Wook developed a software that visualizes users' interests in Twitter and shows how this information can be used in social advertising.
 - Mary Malit: Mary developed a software to analyze users' interests, boards, and domains in Pinterest.
- Reviewer for top journals and conferences including IEEE TKDE, IEEE/ACM TON, WWW, WSDM, SIGKDD, ICDE, EDBT, COSN, CIKM, IMC, Computer Journal, etc.