

# NILOOFAR YOUSEFI

## CONTACT INFORMATION

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## WEB PROFILES

[LinkedIn](#) [Google Scholar](#)

## Education

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|-------------------|---|
| Aug 2012-Aug 2017 | <b>Ph.D. in Industrial Engineering/Operation Research</b><br><b>Emphasis: Computer Science, Machine Learning, Pattern Recognition.</b><br>University of Central Florida ( <a href="#">UCF</a> ), Orlando, Florida, U.S.A.<br>Dissertation on “ <i>Improved Multi-Task Learning Based on Local Rademacher Complexity Analysis.</i> ” |
| Sep 2008-Apr 2011 | <b>Master of Science in Operation Research.</b><br>University of Tehran ( <a href="#">UT</a> ), Tehran, Iran.<br>Master’s Thesis on “ <i>A Framework for Credit Risk Assessment Based on Basel II Capital Accord Using Data Mining Techniques: Case of an Iranian Bank.</i> ”   |
| Sep 2003-Sep 2007 | <b>Bachelor of Science in Applied Mathematics.</b><br>Iran University of Science & Technology ( <a href="#">IUST</a> ), Tehran, Iran.<br>Undergraduate Thesis on “ <i>Numerical Solution of a Non-homogeneous Stochastic Differential Equations with Stochastic Processes.</i> ”  |

## Honors & Awards

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|---------------------|---|
| Sep 2008 – Apr 2011 | <b>Ranked 1st Best Student (by Order of GPA) in Industrial Engineering Department;</b> Among more than 87 graduate students.<br>University of Tehran, Tehran, Iran.               |
| Aug 2008            | <b>Ranked 30th in Graduate School Admissions Nationwide Exam (M.S.);</b> Among more than 42K participants.<br>National Organization for Educational Testing (Sanjesh).            |
| Aug 2007            | <b>Exceptional Talent Awarded.</b><br><a href="#">Iran’s National Elite Foundation.</a>   |
| Aug 2004 – Aug 2007 | <b>Ranked 1st Best Student (by Order of GPA) in Mathematics Department;</b> Among more than 200 undergraduate students.<br>Iran University of Science & Technology, Tehran, Iran. |
| Aug 2003 – Aug 2004 | <b>Ranked 2nd Best Student (by Order of GPA) in Mathematics Department;</b> Among more than 200 undergraduate students.<br>Iran University of Science & Technology, Tehran, Iran. |

## Research Interests

Machine Learning, Computational Social Learning, Statistical Learning Theory, Multitask Learning and Kernel-based Models.

## Professional Experience

Nov 2017-Present	<b>Postdoctoral Research Associate with the emphasize on Computer Science, Social Computational Science, Machine Learning and Agent-based Modeling.</b> Conducting research on “ <i>Deep Agent: A Framework for Information Spread and Evolution in Social Networks</i> .” Department of Industrial Engineering & Management Systems. University of Central Florida ( <a href="#">UCF</a> ), Orlando, Florida, U.S.A.
Aug 2012 – Aug 2017	<b>Graduate Research Assistant</b> Contributing in Machine Learning and Pattern Recognition areas such as Multi-Task Learning and Kernel-based methods. ML <sup>2</sup> Laboratory. University of Central Florida, Orlando, Florida, USA.
Aug 2013 – May 2017	<b>Graduate Teaching Assistant for STEM-Majored Students</b> Providing math and engineering tutoring for first and second year collage students EXCEL & COMPASS Program. University of Central Florida, Orlando, Florida, U.S.A.
Summer 2014-2016	<b>Graduate Mentor for a Group of High School Teachers</b> Preparing and presenting tutorials in image processing and teaching programming skills to high school teachers. AEGIS Research Experience for Teachers (RET) Program. University of Central Florida, Orlando, Florida, USA.
Jan 2016 – present	<b>Graduate Mentor of an Undergraduate Student</b> Providing leadership and mentoring to implement a Multi-Task algorithm for household-level electricity load forecasting and recommendation systems. AEGIS Research Experience for Undergraduates (REU) Program. University of Central Florida, Orlando, Florida, USA.
Aug 2012 – Aug 2015	<b>Graduate Assistant</b> Analyzing and assessing educational data for engineering students of University of Central Florida. CAMP-YES Program. University of Central Florida, Orlando, Florida, U.S.A.
Sep 2009 – Sep 2010	<b>Graduate Teaching Assistant</b> Providing help and leadership for undergraduate students majored in Industrial Engineering & Operation Research. Industrial Engineering & Operation Research Department. University of Tehran, Tehran, Iran.

# Skills

## Research Skills

- High Self-Motivation: having capacity and willingness to explore and investigate new research problems.
- Independence: being able to make progress without close and direct supervision.
- Team Working: having ability and desire to work collaboratively in a team and being able to give constructive feedback and support.
- Professional Contribution: having the confidence to put forward ideas and presenting them to my peers, and defending my position in discussions.
- Problem Solving: desire and persistence in working toward a solution without knowing a right answer.
- Critical Thinking: being able to evaluate and make reasoned judgments about my own work and that of others.
- Flexibility: being adaptive to changing conditions and handling pressure of deadlines.

## Computer Skills

Programing Languages	Proficient in Java, MATLAB, LaTeX. Experience working with C/C++ , Python.
General Software	Professional in MS Office, Mathematica.
Technical Software	Experienc working with SIMULINK, Minitab.

## Selected Research

2015-2016	<b>Improved Learning Guarantees of Multi-Task Learning (MTL) Models</b> Introduced a Talagrand-type concentration inequality for MTL. Established sharp excess risk bounds for MTL in terms of distribution- and data-dependent versions of the Local Rademacher Complexity. Derived fast-rate bounds on the excess risk for many prominent MTL methods, including Schatten-norm, group-norm, and graph-regularized MTL.
2014-2015	<b>A Multi-Task Learning Classification Model with Feature Space Sharing</b> Proposed a flexible Multi-Task Multiple Kernel Learning framework based on Support Vector Machines for binary classification tasks. Employed a parallelizable consensus-form Alternating Direction Method of Multipliers algorithm as the optimization algorithm to determine task affinities. Provided generalization learning guarantee for the proposed MTL model based on global Rademacher complexity.
2010-2011	<b>A Machine Learning-based Model for Default Probability Prediction of Credit Applicants.</b> Provided an academic database of literatures of credit scoring model based on data mining approaches. Proposed a fuzzy KNN-based model for credit scoring task with a case study of an Iranian bank.
2009-2010	<b>A Simulation-based Model for Optimizing Complex Polling Systems with General Arrival Distributions</b>

Proposed an efficient computer simulation approach for estimation and optimization of performance in a polling system.

## Publications

- 2016 Niloofar Yousefi, Yunwen Lei, Marius Kloft, Mansooreh Mollaghasemi, Georgios C Anagnostopoulos. [Local Rademacher Complexity-based Learning Guarantees for Multi-Task Learning](#). Journal of Machine Learning Research: Accepted. arXiv preprint arXiv:1602.05916, 2016
- 2015 Niloofar Yousefi, Michael Georgiopoulos, Georgios C Anagnostopoulos. [Multi-Task Learning with Group-Specific Feature Space Sharing](#) European Conference on Machine Learning and Knowledge Discovery in Databases, 2015.
- 2014 Ali Azadeh, Mohammad Sheikhalishahi, Niloofar Yousefi. [An efficient computer simulationbased approach for optimization of complex polling systems with general arrival distributions](#). Simulation 90 (12), 1346-1359, 2014
- 2014 Abbas Keramati, Niloofar Yousefi, Amin Omidvar. [Default Probability Prediction of Credit Applicants Using a New Fuzzy KNN Method with Optimal Weights](#) Handbook of Research on Organizational Transformations through Big Data Analytics, Chapter 24, 429-465, 2014.
- 2011 Abbas Keramati, Niloofar Yousefi. [A proposed classification of data mining techniques in credit scoring](#). International Conference on Industrial Engineering and Operations Management, 2011.

## Professional Memberships

- Member of Irans National Elites Foundations.
- Member of Iranian Mathematical Society.
- Mathematical Science Society of Iran University of Science & Technology.
- Astronomical Society of Iran ASI.

## Reviewing Referee

- 2018 Reviewer for International Conference on Industrial Engineering and Operations Management ([IEOM-2018](#)).
- 2017 Reviewer (recommended by Marius Kloft) for Thirty-First AAAI (American Association for Artificial Intelligence) conference on Artificial intelligence ([AAAI-2017](#)).
- 2017 Reviewer for International Conference on Pattern Recognition Systems ([CPRS-2017](#)).
- 2017 Reviewer for Neural Computing and Applications Journal ([NCAA](#)).
- 2017 Reviewer for IEEE Transactions on Cybernetics Journal ([IEEE SMC](#)).