

Nabiha Asghar

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- HIGHLIGHTS
- ◇ **Refereed Publication:** N. Asghar, J. Hoey. *Intelligent Affect: Rational Decision Making for Socially Aligned Agents*. Proceedings of the 31st Conference on Uncertainty in Artificial Intelligence (UAI), Amsterdam, July 2015.
 - ◇ **Technical Report:** N. Asghar, J. Hoey. *Monte-Carlo Planning for Socially Aligned Agents using Bayesian Affect Control Theory*. University of Waterloo School of Computer Science, Technical Report # CS-2014-21, December 2014.
 - ◇ **Honors & Awards:** Recipient of Ontario Graduate Scholarship for Jan-Dec 2016, Gold Medal and 100% Merit Scholarship in BS.c. Honors Mathematics
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- EDUCATION
- ◇ **University of Waterloo**, Waterloo, ON.
Ph.D. in Computer Science (Sept 2014 - Present; 4th term in progress).
GPA: 95%, recipient of Ontario Graduate Scholarship 2015-16.
 - ◇ **University of Waterloo**, Waterloo, ON.
M.Math. in Combinatorics & Optimization (Sept 2011 - Dec 2012).
Dissertation title: *Grötzsch's Theorem*. URL: <http://tinyurl.com/nabmsthesis>
CGPA: 88.2%.
 - ◇ **Lahore University of Management Sciences**, Lahore, Pakistan.
B.Sc. Honors. in Mathematics (2006-2010).
CGPA: 3.91/4.00, Gold Medal, Dean's Honor List, Full Merit Scholarship for 3 years
- RELEVANT COURSES
- Machine Learning (ongoing), Applied Machine Learning, Data Mining, Big Data Quality, Design and Analysis of Algorithms, Combinatorial Optimization, Approximation Algorithms for Optimization, Linear Algebra
- REFEREED PUBLICATION
- N. Asghar, J. Hoey. *Intelligent Affect: Rational Decision Making for Socially Aligned Agents*. Proceedings of the 31st Conference on Uncertainty in Artificial Intelligence (UAI), Amsterdam, July 2015.
- TECHNICAL REPORT
- N. Asghar, J. Hoey. *Monte-Carlo Planning for Socially Aligned Agents using Bayesian Affect Control Theory*. University of Waterloo School of Computer Science, Technical Report # CS-2014-21, December 2014.
- RESEARCH PROJECTS
- ◇ "Machine Learning models for Causal Relation Extraction from Natural Language Texts" (ongoing)
Course: "*Machine Learning*", 2016.
 - ◇ "Algorithms for Discovery of Functional Dependencies and Conditional Functional Dependencies in Big Data: A Comparative Study"
Course: "*Big Data Quality*", 2015.
 - ◇ "A Python and Java based Intelligent System for Medical Data Encoding"
Course: "*Data Structures and Standards in Health Informatics*", 2015.

- ◇ “Yelp Dataset Challenge: Review Rating Prediction via Supervised Machine Learning”
Course: “*Applied Machine Learning*”, 2014.
 - ◇ “Quantum Algorithms for Matchings and Network Flows”
Course: “*Quantum Information Processing*”, 2012.
 - ◇ “Approximation Algorithms for Edge-Disjoint Paths Problem”
Course: “*Approx. Algorithms for Combinatorial Optimization*”, 2012.
- RELEVANT SKILLS
- ◇ Machine Learning, Probabilistic Modeling, Natural Language Processing, Data Quality, Data Analysis, Analysis and Implementation of Algorithms, Optimization Techniques, Technical Writing
 - ◇ Programming: Proficient in Python, MATLAB. Familiar with: Java, basic Bash scripting.
 - ◇ Linux, SQL, SVN, Git, Amazon Web Services
 - ◇ Strong written and communication skills. Have delivered several technical talks and lectures during Masters, Ph.D. and teaching assistantships.
- WORK EXPERIENCE
- ◇ **Undergraduate & Graduate Teaching Assistant**, (Sep 2008 – Dec 2012, Sep 2014 – Present).
Assisted with tutorials, lectures and exams for several Math and CS undergraduate and graduate courses at Lahore University of Management Sciences and University of Waterloo.
 - ◇ **Research Associate**, Computational Health Informatics Lab, University of Waterloo (Jan – June 2014)
Worked on a new algorithm for solving large continuous POMDPs, demonstrated it on robot navigation problems and conducted performance evaluation through Python simulations.
 - ◇ **Visiting Faculty**, Department of Mathematics, Lahore University of Management Sciences (Jan – May 2013)
Taught ‘Real Analysis’ and ‘Partial Differential Equations’ to senior undergraduates.
 - ◇ **Intern**, iHealth: Disease Surveillance System (May – Aug 2008).
Implemented clustering algorithms in Java to investigate the causes of prevalence of Tuberculosis in Pakistan. URL: <http://tinyurl.com/mcz5jyd>
- EXTRA CURRICULAR
- ◇ **Member: Graduate Student Committee**, Women in Computer Science, University of Waterloo (Sep 2014 – Aug 2015).
Responsible for arranging social events for female graduate students.
 - ◇ **Captain: Women’s Cricket Team**, Lahore University of Management Sciences (2006 – 2009).
Led my team in several stand-alone matches and inter-university tournaments.
 - ◇ **Member: Women’s Basketball Team**, Lahore University of Management Sciences (2007 – 2008).
Participated in several matches of various inter-university tournaments.