# MUNIRA SYED

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## PROFESSIONAL SUMMARY

- PhD candidate interested in opportunities involving data mining, machine learning, deep learning, text mining, network representation learning, and inter-disciplinary research
- experienced in a variety of applications and research topics like learning analytics, user content consumption, truth discovery, network representation learning, sentiment analysis, topic modeling
- engaged in industry collaborations with IBM Research India and Conde Nast for various research projects
- thrives in a dynamic multitasking and collaborative environment, enjoys designing algorithms and analyzing results

## EDUCATION

**University of Notre Dame** — Notre Dame, IN
PhD, Computer Science and Engineering — expected May 2020
Advisor: Dr. Nitesh Chawla **University of Notre Dame** — Notre Dame, IN
MS, Computer Science and Engineering — August 2019

**Visvesvaraya National Institute of Technology** — Nagpur, India
BTech (Bachelor of Technology), Computer Science and Engineering — May 2015

## PUBLICATIONS

- **M. Syed**, J. Marshall, A. Nigam, N. Chawla "Gender Prediction through Synthetic Resampling of User Profiles using SeqGANs" under review in CSoNet 2019.
- **M. Syed**, M. Chetlur, S. Afzal, G. A. Ambrose and N. V. Chawla "Implicit and Explicit Emotions in MOOCs" In Proceedings of The 12th International Conference on Educational Data Mining (EDM 2019), 2019, pp. 432 - 437
- **M. Syed**, T. Anggara, A. Lanski, X. Duan, G. A. Ambrose, and N. V. Chawla. 2019. "Integrated Closed-loop Learning Analytics Scheme in a First Year Experience Course. In The 9th International Learning Analytics & Knowledge Conference (LAK19), March 48, 2019, Tempe, AZ, USA. ACM, New York, NY, USA, Article 4, 10 pages. https://doi.org/10.1145/3303772.3303803
- S. Afzal, B. Sengupta, **M. Syed**, N. Chawla, G. A. Ambrose, M. Chetlur. 2017. "The ABC of MOOCs: Affect and its inter-play with behavior and cognition." Affective Computing and Intelligent Interaction (ACII), 2017 Seventh International Conference on. IEEE, 2017.
- J. Marshall, **M. Syed**, D. Wang. 2016. "Hardness-aware truth discovery in social sensing applications." Distributed Computing in Sensor Systems (DCOSS), 2016, International Conference on. IEEE, 2016.

## PROFESSIONAL EXPERIENCE

**IBM Research, Dublin** — June 2019 - August 2019
*Internship*
Developed a modified Efficient Neural Architecture Search algorithm and code for Time Series prediction

**University of Notre Dame** June 2015 - Present

*Graduate Research Assistant (RA)*

- Designed demographic models using network representation learning on bipartite networks, generated from approximately 1 million users' content consumption data with applications in news feed ranking, targeted advertisement, and recommendations in collaboration with Conde Nast
- Developed a pipeline for gender prediction using RNNs with Node2vec
- Mentored two undergraduate students on a project that uses node2vec for classification on imbalanced datasets using different distance metrics
- Explored solutions for imbalanced class problems using topic modeling and generative adversarial networks as applied to gender prediction
- Analyzed an integrated closed loop learning analytics scheme deployed on a First Year of Studies Course of 1500+ students, demonstrating that interventions were correlated with improved performance and retention
- Investigated the association of students' affect with behavior and cognition using sentiment analysis and text mining, as well as examined the positivity of students calculated through explicit and implicit emotions expressed in collaboration with IBM Research, Bangalore
- Studied the use of user devices as a proxy for video clickstream data to predict student dropout in Massive Open Online Courses
- Designed and implemented an expectation-maximization algorithm that solves a maximum likelihood estimation problem to predict the truth or falsehood of tweets as well as the reliability of the tweeter

*Graduate Teaching Assistant (TA)*

Supervised lab sessions, held office hours, graded homework, programming assignments, and exams for Machine Learning (Spring 2019), Fundamentals of Computing II (Spring 2016), and Computer Networks (Fall 2015)

## TECHNICAL SKILLS & AWARDS

**Programming Languages**: Python (scikit-learn, pandas, gensim, scipy, jupyter notebook, pytorch, keras, networkx, tensorflow, pyspark), C++, C, R, Matlab, Bash, Oracle, SQL, HTML, CSS, JSP, Perl, Java

**Other Skills**: Inferential Statistics, LaTeX, Work Queue (scalable master/worker framework)

**Travel Award**: For CRA-W in April 2017 and SWE conference in October 2018

**Scholarship**: Tuition scholarship for the University of Notre Dame June 2015 - Present

**Honors**: Upsilon Pi Epsilon Computer Science Honor Society Member April 2017-Current

## LEADERSHIP & SERVICE

Graduate Student Board Member, CSE Department, Notre Dame Aug. 2018 - Aug. 2019
Social Co-Chair, Graduate Society of Women Engineers, Notre Dame June 2018 - June 2019
Mentor, STEMentorship by AWIS, Notre Dame Oct. 2018 - May 2019
Mentor, Graduate Mentoring Program, CSE department, Notre Dame Sept. 2018 - May 2019
Reviewed a journal paper for KAIS