AASTHA NIGAM

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PROFILE

Data scientist with strong background in data mining, machine learning, recommendation systems, big data, and statistics. Passionate about building data driven models to solve real world business applications across various sectors.

EDUCATION

UNIVERSITY OF NOTRE DAME — Notre Dame, IN
Ph.D. in Computer Science and Engineering, *Advisor*: Prof. Nitesh V. Chawla — Anticipated May 2018
Thesis Title: Integrating and Modeling Diverse Nuggets of Data to Model User Behavior

IIIT-DELHI — New Delhi, India
Bachelors in Technology (with Hons.) in Computer Science and Engineering (*GPA: 9.25/10*) — May 2012

EXPERIENCE

UNIVERSITY OF NOTRE DAME — Notre Dame, IN
Research Assistant, Department of Computer Science and Engineering — July 2014 – Present

- Research focuses on building context driven machine learning models to solve real world problems with applications to areas as diverse as social media, online healthcare and world peace accords. Models aim at mining interesting patterns from structured and unstructured data utilizing key concepts from machine learning, text analytics and data mining.
- Developed personalized user profiles for online health consumers (~ 2 million users), performed user segmentation using demographics and analyzed factors affecting their preferences for a large-scale national online health content provider.
- Implemented a successful framework to model content gap between a media company and their Twitter users to increase user engagement. The company leveraged the framework to improve content quality posted on Twitter.

IBM RESEARCH — Dublin, Ireland
Research Intern — June 2015 – August 2015

- Implemented various optimization algorithms such as AdaGrad as an extension to the Machine Learning library by Apache Spark for large-scale data cluster computing. Currently used by the company; resulted in a publication.
- Participated in ICDM 2015 Kaggle Data Challenge to connect user actions across different devices using context

UNIVERSITY OF NOTRE DAME — Notre Dame, IN
Research Assistant, Department of Computer Science and Engineering — January 2014 – July 2014

- Research focused on classifying several aspects of situational context from noisy data to improve navigation of robots in human social environment. First research to predict situational context for robots; resulted in a publication.
- Employed a context based perception approach leveraging audio and visual signals for learning various situational contexts from large-scale real world multimodal data using machine-learning models.

INNOVATION LABS, TATA CONSULTING SERVICES R&D — Noida, India
Researcher — July 2012 – July 2013

- Developed a web based collaborative workbench for real time analysis and visualization, using tools such as d3 library and JavaScript, for varied datasets including car sensor data and time-series. Successfully used for evaluating research outputs.

ABB RESEARCH — Bengaluru, India
Research Intern — May 2011 – July 2011

- Developed an android-based mobile application for building real time workflows in the power sector. Designed customized process objects that enabled a user to create more descriptive and domain relevant workflows.

SELECTED PUBLICATIONS

- **A. Nigam**, *et.al*. *Connecting the Dots to Infer Followers' Topical Interest on Twitter*. IEEE International Conference on Behavioral, Economic, and Socio-Cultural Computing, 2016.
- AT Hadgu, **A. Nigam**, *et.al. Large-scale learning with AdaGrad on Spark.* IEEE International Conference on Big Data,2015.

TECHNICAL SKILLS & PROFESSIONAL ACTIVITIES

Computer Skills: Proficient in Python, R, Spark, Hadoop, Condor, Java, SQL, Weka, MATLAB, JavaScript, C, C++, LaTeX.
Professional Affiliations: ACM Student Member, Society of Women Engineers (SWE), Association of Women in Science (AWIS)
Honors & Awards: Scholarship to attend CRA-W Graduate Cohort (2015); Second Rank, Schurz Data Innovation Challenge (2015).
Leadership: Professional Development Chair, Graduate Student Union & SWE, University of Notre Dame (2016); Graduate Student Representative, Univ. Committee on Women Faculty and Students (2016); Member, Graduate Student Board, CSE Dept. (2016).
Teaching Skills: Designed 5-day python course for middle school students (2016); Teaching assistant for *Design and Analysis of Algorithms* (2013), *Basic Unix for Engineers* (2014), and *Theory of Computation* (2011).