# Nishant Subramani - *Machine Learning Researcher*

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## Objective

I'm a 2nd year PhD student looking for full-time opportunities in machine learning and applied machine learning research. My interests are in ML and deep learning with applications in language, vision, autonomous vehicles, medicine, and finance.

## Education

- **Courant Institute of Mathematical Sciences - New York University** New York, NY
  PhD Computer Science (Deep Learning & NLP); Sept 2017 – Present
  - **Research Advisors:** Kyunghyun Cho and Sam Bowman
  - **Graduate Courses**: Deep Learning, Deep Generative Models, Deep Learning for NLP, Network & Mobile Systems
- **Northwestern University** Evanston, IL
  B.A./M.S. Statistics/Computer Science; **Stat GPA:** 3.963/4.000; **MS GPA:** 4.000/4.000 Sept 2013 – June 2017
  - **Graduate Courses**: Deep Learning, Machine Learning Foundations, Probabilistic Graphical Models, Data Mining, Adv Topics in ML, Statistical Pattern Recognition, Computational Learning Theory, Adv Topics in Bayesian Stats
  - **Undergrad Courses**: Machine Learning, Intro to AI, Regression Analysis, Statistical Computing, Statistical Theory & Methodology I-III, Theory of Computation, Biochemistry, Cell and Molecular Biology

## Publications

1. Subramani, Nishant, Samuel, Bowman, and Kyunghyun Cho. "Investigating the Sentence Space of a Recurrent Language Model" In *ACL*. 2019. **Under Review**
2. Subramani, Nishant. "Pag2admg: An Algorithm for the Complete Causal Enumeration of a Markov Equivalence Class" In *ICML Workshop on CausalML*. 2018.
3. Subramani, Nishant, and Doug Downey. "PAG2ADMG: A Novel Methodology to Enumerate Causal Graph Structures" In *31st AAAI Conference on Artificial Intelligence*. 2017. **Student Abstract**
4. Subramani, Nishant. "Identifying the Best Predictors of Unmet Health Care Needs in Children with DBD." *Northwestern Undergraduate Research Journal* (2015).

## Research Experience

- **Research Assistant in Deep Learning/NLP** New York University
  **PIs: Kyunghyun Cho and Sam Bowman** September 2017 – Present
  - Worked on analyzing the sentence space as specified by a recurrent neural language model. I also am working on using a language model as a universal decoder for multi-task natural language generation.
- **Deep Learning Research Intern** Salesforce (Metamind Group)
  **PI: Richard Socher** March 2017 – August 2017
  - Worked on building a multitask NLP system trained end-to-end for translation, summarization, and question answering.
- **Research Assistant in Deep Learning & NLP** Northwestern University
  **PI: Doug Downey** July 2014 – March 2015; March 2016 – June 2017
  - Worked on hyperparameter optimization, ensemble methods, importance sampling, and alternative dropout schemes for recurrent neural language modeling. I also dabbled in modifying word2vec to incorporate prior knowledge.
- **Research Assistant in Biomedical Informatics** Stanford University
  **PI: Olivier Gevaert** Jun 2015 – Jan 2016
  - Worked on Bayesian network structure learning to identify a genetic basis for Glioblastoma.

## Professional Service

- **Deep Learning Consultant** Talkspace
  Hiring Manager: Bonnie Ray November 2017 – August 2018
  - Taught Talkspace's Data Science team about deep learning fundamentals and how to implement deep models for text.
  - Helped advise building and training deep neural network models for domain-specific problems with text.
- **Conference Reviewer** May 2017 – Present
  Delegate Reviewer for ICLR 2019; NIPS 2017; ICCV 2017

## Skills

- **Proficient Languages/Packages:** Python, R, PyTorch
- **ML Methods:** Deep Neural Nets (RNNs, CNNs, Transformers), Neural Seq2seq Models with Attention, Bayesian Networks, Graphical Models
- **Other Computational Methods:** Variational Inference, AdaBoost, Clustering

## Research Presentations

- ***Pag2admg***. ICML 2018, Stockholm, Sweden. Causal ML Workshop. Poster. July 2018
- ***PAG2ADMG***. AAAI 2017, San Francisco, CA. Student Abstract. Spotlight Talk. Poster. February 2017
- ***How Evil are Turnovers?*** Apr 2014
  Computational Statistics Conference, Evanston, IL. Poster.