**Muni Sreenivas Pydi** **pydi@wisc.edu**

INTERESTS Adversarial Robustness in Machine Learning, Optimal Transport, Learning Theory, Graphs

EDUCATION

**University of Wisconsin-Madison**, Madison, WI, USA
*PhD, Electrical Engineering* 2019 - Present
*Master of Science, Electrical Engineering* 2017 - 2019

**Indian Institute of Technology (IIT) Madras**, Chennai, India
*Bachelor of Technology (Honours), Electrical Engineering* 2010 - 2014

EXPERIENCE

**University of Wisconsin-Madison**, Madison, WI, USA
*Teaching Assistant (Departments of ECE, CS and Mathematics)* Aug 2017 - May 2019

- Head TA for CS761: Mathematical Foundations of Machine Learning - grad-level class, size 100, taught by Prof. Rob Nowak. Held review sessions, graded homeworks & quizzes
- TA for CS532: Matrix Methods for Machine Learning - grad-level class, size 50, taught by Prof. Po-Ling Loh. Ran hands-on deep learning lectures, held review sessions

**Indian Institute of Science (IISc)**, Bengaluru, India
*Research Assistant (Statistics and Machine Learning Lab)* Aug 2016 - Jul 2017

- Published a paper on spectral clustering at IEEE Int'l Symposium on Information Theory
- Developed deep learning models for classifying underwater sonar signals

**Samsung R&D Institute**, Bengaluru, India
*Senior Software Engineer (4G/LTE protocol stack development)* Aug 2014 - Jul 2016

- Published a paper on wireless protocols at IEEE Nat'l Conference on Communications, India.
- Developed protocol stack for the largest 4G/LTE deployment project in India

**Deutsche Bank**, Mumbai, India
*Summer Intern (Statistical Modeling)* May 2013 - Jul 2013

- Developed time series models to predict longevity rates for pricing insurance products

**Indian Space Research Organization**, Sriharikota, India
*Summer Intern (Digital System Design)* Jun 2012 - Jul 2012

PUBLICATIONS

1. **Muni Sreenivas Pydi** and Varun Jog. "Adversariak Hypothesis Testing via Unbalanced Optimal Transport." *Manuscript*, 2020.
2. **Muni Sreenivas Pydi** and Varun Jog. "Adversariak Risk via Optimal Transport and Optimal Couplings." ICML 2020. (Full paper under review at IEEE Transactions on Information Theory)
3. **Muni Sreenivas Pydi** and Vishnu Lokhande. "Active Learning with Importance Sampling." *NeurIPS Workshop on ML with Guarantees, December 2019.*
4. **Muni Sreenivas Pydi**, *Varun Jog and Po-Ling Loh. "Graph-Based Ascent Algorithms for Function Maximization." Allerton Conference on Communication, Control and Computing, 2018.*
5. **Muni Sreenivas Pydi**, *and Ambedkar Dukkipati. "On Consistency of Compressive Spectral Clustering."* IEEE International Symposium on Information Theory (ISIT), June 2018.
6. *Karthik Nagasubramanian, and* **Muni Sreenivas Pydi**. *"Random access retransmission scheme for power limited nodes." 23rd IEEE National Conference on Communications (NCC), 2017.*
7. *Ashwin Guha,* **Muni Sreenivas Pydi**, *Biswajit Paria and Ambedkar Dukkipati. "Analytic Connectivity of General Hypergraphs." arXiv preprint arXiv:1701.04548, 2017.*

SKILLS **Programming:** Python, MATLAB, C, Java, R **Machine Learning:** PyTorch, Keras, scikit-learn

GRADUATE COURSES **Machine Learning (ML)/CS**: Theoretical ML, Foundations of ML, Advanced Learning Theory, Large Scale ML & Optimization, Optimal Transport for ML, Advanced Algorithms

**Statistics/Math/Control**: Robust Statistics, Optimization in Statistics, Analysis I-II, Real Analysis, Topics in Probability, Information Theory, Linear Systems, Nonlinear Systems