

# Veeranjaneyulu Sadhanala

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CONTACT INFORMATION	1616 E 50th Pl Apt 6D Chicago, IL 60615 USA	Phone: (347) 845-3950 veeranjaneyulus@gmail.com veeranjaneyulus.github.io
RESEARCH INTERESTS	Shape constrained regression, Optimization and Recommendation systems	
EDUCATION	<b>University of Chicago</b> , Chicago, Illinois USA	Aug 2019 - Current
	Post-doctoral researcher working on interpreting black-box machine learning models with Prof. Sendhil Mullainathan and Prof. Tengyuan Liang	
	<b>Carnegie Mellon University</b> , Pittsburgh, Pennsylvania USA	Aug 2013 - May 2019
	Ph.D. , Machine Learning	
	<ul style="list-style-type: none"><li>• Dissertation Topic: “Nonparametric Methods with Total Variation Regularization”</li><li>• Advisor: Ryan J. Tibshirani</li></ul>	
	M.S., Machine Learning, December 2017	
	<b>Indian Institute of Technology</b> , Bombay, India	Jul 2005 - May 2009
	B.Tech., Computer Science and Engineering	
TEACHING EXPERIENCE	<b>Carnegie Mellon University</b> , Pittsburgh, Pennsylvania USA	
	<i>Teaching Assistant</i>	Fall 2014 - Spring 2015
	Introduction to Machine Learning(10-715), Fall 2014, CMU	
	Convex Optimization(10/36-725), Spring 2015, CMU	
INDUSTRY EXPERIENCE	<b>Amazon</b> , San Jose, CA, USA	
	<i>Summer Internship</i>	Jun 2016 - Aug 2016
	Studied channel assignment and connectivity problems of a wireless mesh network via max-k-cut and graph effective resistance formulations.	
	<b>Morgan Stanley</b> , New York, NY, USA	
	<i>Quantitative Analyst/Associate</i>	Jul 2009 - May 2013
	Developed software for valuation of interest rate and other derivatives in C++ using analytical formulas, backward induction and PDE solvers. Brought around 250000 interest rates swaps and swaptions in various currencies into production in a new library for risk calculation.	
PAPERS	Additive Models with Trend Filtering <b>Veeranjaneyulu Sadhanala</b> , Ryan Tibshirani. Annals of Statistics, 2019.	
	A Higher-Order Kolmogorov-Smirnov Test <b>Veeranjaneyulu Sadhanala</b> , Aaditya Ramdas, Yu-Xiang Wang, Ryan Tibshirani. Oral Presentation. International Conference on Artificial Intelligence and Statistics, 2019.	
	Higher-Order Total Variation Classes on Grids: Minimax Theory and Trend Filtering Methods <b>Veeranjaneyulu Sadhanala*</b> , Yu-Xiang Wang*, James Sharpnack, Ryan Tibshirani. Advances in Neural Information Processing Systems, 2017. (* indicates equal contribution)	

Total Variation Classes Beyond 1d: Minimax Rates, and the Limitations of Linear Smoothers  
**Veeranjaneyulu Sadhanala\***, Yu-Xiang Wang\*, Ryan Tibshirani.  
 Advances in Neural Information Processing Systems, 2016.

Graph Sparsification Approaches for Laplacian Smoothing  
**Veeranjaneyulu Sadhanala\***, Yu-Xiang Wang\*, Ryan Tibshirani.  
 International Conference on Artificial Intelligence and Statistics, 2016.

Parallel and Distributed Block-Coordinate Frank-Wolfe Algorithms  
 Yu-Xiang Wang, **Veeranjaneyulu Sadhanala**, Wei Dai, Willie Neiswanger, Suvrit Sra, and Eric Xing. International Conference on Machine Learning, 2016.

Scheduling of dataflow models within the reconfigurable video coding framework  
 Jani Boutellier , **Veeranjaneyulu Sadhanala**, Christophe Lucarz , Philip Brisk , Marco Mattavelli.  
 IEEE Workshop on Signal Processing Systems, 2008.

PROFESSIONAL SERVICES	Reviewed for Annals of Statistics (2017-2020), Journal of the American Statistical Association (2017), SIAM Journal on Optimization (2016), Neural Information Processing Systems (2016, 2018,2019), International Conference on Artificial Intelligence and Statistics (2016-2021), Journal on Advances in Signal Processing (2018), Optimization Methods and Software (2015), Applied and Computational Harmonic Analysis (2021).
PROGRAMMING SKILLS	Proficient in C++, Java, Python, MATLAB, and R. Can write in Scala and SQL. Can work with TensorFlow. Experienced in implementing numerical algorithms. Co-developed <b>glmgen</b> package for trend filtering a time series.
COURSE KNOWLEDGE	Statistical machine learning, Convex optimization, Probabilistic graphical models, Deep neural networks for Natural language processing and Computer vision.