

# Shalmali Joshi

## Curriculum Vitae

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Postdoctoral Fellow  
Vector Institute

Past Affiliations:  
IDEA Lab, WNCG

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### Education

'13- '18	Ph.D., Electrical & Computer Engg	UT Austin (Advisor: Joydeep Ghosh)
'09-'11	M.S., Electrical & Computer Engg	UC, San Diego
'05-'09	B. Tech., Electrical Engg	Vishveshvaraya Natl. Inst. of Tech., India

### Research Interests

Interpretability, Fairness and Robustness of Clinical Machine Learning Models

### Scientific products

#### *Manuscripts - Submitted/ In preparation*

1. **Shalmali Joshi\***, Sana Tonekaboni\*, Melissa McCradden, and Anna Goldenberg. What clinicians want: Contextualizing explainable machine learning for clinical end use. 2019
2. **Shalmali Joshi**, Oluwasanmi Koyejo, Been Kim, and Joydeep Ghosh. **xGEMS**: Generating Exemplars to Explain Black-Box Models. 2018

#### *Publications - Conference and Journal*

1. **Shalmali Joshi**, Rajiv Khanna, and Joydeep Ghosh. Co-regularized monotone regtargeting for semi-supervised LeTOR. In *Siam International Conference on Data Mining (SDM)*, 2018
2. **Shalmali Joshi**, Suriya Gunasekar, David Sontag, and Joydeep Ghosh. Identifiable phenotyping using constrained Non-Negative matrix factorization. In *Machine Learning for Healthcare Conference*, pages 17–41. jmlr.org, 10 December 2016
3. **Shalmali Joshi**, Joydeep Ghosh, Mark Reid, and Oluwasanmi Koyejo. Rényi divergence minimization based co-regularized multiview clustering. *Mach. Learn.*, 104(2-3):411–439, 1 September 2016
4. **Shalmali Joshi**, Oluwasanmi Koyejo, Kristine Resurreccion, and Joydeep Ghosh. Simultaneous prognosis and exploratory analysis of multiple chronic conditions using clinical notes. In *2015 International Conference on Healthcare Informatics*, pages 243–252. [ieeexplore.ieee.org](http://ieeexplore.ieee.org), October 2015

**Peer Reviewed Workshop/Abstracts**

5. **Shalmali Joshi**, Been Kim, Oluwasanmi Koyejo, and Joydeep Ghosh. Through the looking GANs. In *Women in Machine Learning Workshop @ NIPS*, 2017
6. **Shalmali Joshi**, Oluwasanmi Koyejo, and Joydeep Ghosh. Simultaneous prognosis of multiple chronic conditions from heterogeneous EHR data. In *2015 International Conference on Healthcare Informatics*, pages 497–497. [ieeexplore.ieee.org](http://ieeexplore.ieee.org), October 2015
7. **Shalmali Joshi**, Oluwasanmi Koyejo, and Joydeep Ghosh. Multiview clustering via constrained bayesian inference. In *Workshop on Divergence Methods for Probabilistic Inference @ International Conference on Machine Learning (ICML)*, 2014

**Theses**

8. (In preparation) **Shalmali Joshi**. *Constraint Based (Latent Variable) Approaches to Interpretable and Versatile Machine Learning*. PhD thesis, The University of Texas at Austin, December 2018
9. **Shalmali Joshi\***, Aditya Mundle\*, and Aishwarya Parthasarthy\*. *Spike Sorting of Retinal Neural Responses*. B. Tech. thesis, Visvesvaraya National Institute of Technology, India, June 2009

\*Equal Contribution.

**Teaching experience (Teaching Assistant)**

Fall '15	Advanced Predictive Modeling	McCombs School of Business, UT Austin
Fall '14	Graduate Data Mining	Electrical & Computer Engg., UT Austin
Spring '14	Graduate Data Mining	Electrical & Computer Engg., UT Austin

**Work Experience**

Nov '18-	Postdoctoral Fellow	Vector Institute, Toronto, ON, CA
Summer '15	Technical Intern	<b>Yahoo! Labs</b> , Sunnyvale, CA, US
June '13-June '15	Software Engineer	<b>Amazon Lab 126</b> , Sunnyvale, CA, US
Summer '10	HPC Algorithms Intern	<b>Life Technologies</b> , Carlsbad, CA, US

**Awards/Service****Program Committee**

ICLR Workshop, DebugML	2019
NIPS Workshop, Machine Learning for Health	2018
NIPS Workshop, Machine Learning for Health	2017

**Reviewer**

ICML	2019
WiML@NIPS (Women In Machine Learning)	2017
MLHC	2017
NIPS Workshop on Machine Learning for Health	2016
NIPS	2015
ICML	2015
TKDD	2014

**Awards**

2017	WiML@NIPS Travel Award
2015	IEEE ICHI Travel Award
2003	National Talent Search Scholarship, Govt. of India

**Technical Skills**

Programming/Scripting Languages	Python, C++, C, R, MATLAB, Perl, Bash, XML
Libraries, Tools, IDEs	Tensorflow, scikit_learn, numpy, scipy, openCV, vim, STL, Cvx, LibSVM, $\text{\LaTeX}$ , Qt Creator, RStudio, CUDA API, gcc, gdb
Versioning Tools	Git, svn
Operating Systems	OSx, Linux

**References**

Available Upon Request