Shalmali Joshi

Curriculum Vitae

Ph.D. Candidate
Electrical and Computer Engineering,
University of Texas at Austin

Affiliations:
IDEAL Lab, WNCG

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Education

'13-	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 Technology, India

Research Interests

Machine Learning, Data Science:
Interpretable Latent Variable Models, Semi–supervised and Unsupervised Learning from heterogenous data, Learning to Rank (LETOR), Interpretability of Machine Learning models, Machine Learning for Healthcare.

Scientific products

Publications - Conference and Journal

1. **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

2. **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

3. **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, October 2015

Manuscripts - In preparation/submitted

4. **Shalmali Joshi**, Rajiv Khanna, and Joydeep Ghosh. Co-regularized monotone regtargeting for semi-supervised LETOR. 2017

5. Rajiv Khanna, **Shalmali Joshi**, Alex Dimakis, and Joydeep Ghosh. Greedy feature selection with transformed features. 2017

Theses

6. (In preparation) **Shalmali Joshi**. *Constrained Latent Variable Models for Semi–Supervised Learning for Heterogeneous data*. PhD thesis, The University of Texas at Austin, December 2017

7. **Shalmali Joshi***, Aditya Mundle*, and Aishwarya Parthasarthy*. *Spike Sorting of Retinal Neural Responses*. B. Tech. thesis, Visvesvaraya National Institute of Technology, India, June 2009

Peer Reviewed Workshop/Abstracts

8. **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, October 2015

9. **Shalmali Joshi**, Oluwasanmi Koyejo, and Joydeep Ghosh. Multiview clustering via constrained bayesian inference. In *Workshop on Divergence Methods for Probabilistic Inference*, 2014

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

Full Time

June '13-June '15	Software Engineer	Lab 126, Sunnycale CA

Internships

Summer '15	Technical Intern	Yahoo! Labs, Sunnyvale CA
Summer '10	HPC Algorithms Intern	Life Technologies, Carlsbad CA

Awards/Service

Ad-hoc peer review

MLHC	2017
NIPS Workshop on Machine Learning for Health	2016
NIPS	2015
ICML	2015
TKDD	2014

Awards

2015	IEEE ICHI Travel Award
2003	National Talent Search Scholarship, Govt. of India

*Equal Contribution.

Technical Skills

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

References

Available upon request.

References

[1] Rajiv Khanna, **Shalmali Joshi**, Alex Dimakis, and Joydeep Ghosh. Greedy feature selection with transformed features. 2017.

[2] **Shalmali Joshi**. *Constrained Latent Variable Models for Semi–Supervised Learning for Heterogeneous data*. PhD thesis, The University of Texas at Austin, December 2017.

[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**, 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.

[5] **Shalmali Joshi**, Rajiv Khanna, and Joydeep Ghosh. Co-regularized monotone regtargeting for semi-supervised LETOR. 2017.

[6] **Shalmali Joshi**, Oluwasanmi Koyejo, and Joydeep Ghosh. Multiview clustering via constrained bayesian inference. In *Workshop on Divergence Methods for Probabilistic Inference*, 2014.

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[8] **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, October 2015.

[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.