Yutong Wang

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Education

Sep'16–present	**University of Michigan, Ann Arbor**	3.9 GPA
	Ph.D. candidate in electrical engineering & computer science (EECS)	
	Research focus: Multiclass classification theory. Solvers for support vector machines.	
Sep'14–Jun'16	**University of California, Davis**	3.9 GPA
	M.A. in mathematics	
Sep'10–Apr'14	**University of Michigan, Ann Arbor**	3.7 GPA
	B.S.E. in EECS with minor in mathematics	

Skills

Programming: Python, C/C++, R, MATLAB.

Machine learning: Pytorch, scikit-learn, LIBLINEAR.

Experience

Sep'16–present — Graduate student research assistant — Advisors: C. Scott and L. Balzano
Department of EECS, University of Michigan
Theory of multiclass support vector machine with publication in NeurIPS 2020. Development of high performance solver for multiclass support vector machine.

Jun'19–Sep'19 — Recursion Cellular Image Classification — Kaggle competition.
We applied deep neural networks to cellular imaging in biological research. Our team placed 110th out of over 800 teams.

Publications

Yutong Wang and Clay Scott. **"Reflection code for multiclass support vector machines."** *In preparation for JMLR.* `https://github.com/YutongWangUMich/liblinear`. I developed a new solver for the linear Weston-Watkins multiclass support vector machine, extending the `LIBLINEAR` library.

Yutong Wang and Clay Scott. **"Weston-Watkins Hinge Loss and Ordered Partitions."** *Accepted to NeurIPS 2020.*

Tasha Thong, Yutong Wang, Michael D. Brooks, Christopher T. Lee, Clayton Scott, Laura Balzano, Max S. Wicha, Justin A. Colacino. **"Hybrid Stem Cell States: Insights Into the Relationship Between Mammary Development and Breast Cancer Using Single-Cell Transcriptomics"** *Frontiers in Cell and Developmental Biology, vol. 8, article 288, 2000.*

Y. Wang, T. Thong, V. Saligrama, J. Colacino, L. Balzano, and C. Scott. **"A Gene Filter for Comparative Analysis of Single-Cell RNA-Sequencing Trajectory Datasets."** BioRxiv, `https://doi.org/10.1101/637488`. Technical report.

Y. Wang, M. Reyes, and D. Neuhoff. **"Correct Convergence of Min-Sum Loopy Belief Propagation in a Block Interpolation Problem"** arXiv, `https://arxiv.org/abs/1702.06391`. Technical report.

Awards

Best speed oral presentation for *"Unsupervised feature selection for manifold alignment of scRNA-seq data"* at the 2019 Michigan Student Symposium for Interdisciplinary Statistical Sciences.

Most interesting methodological advancement for *"A convex clustering formulation using the similarity matrix"* at the 2017 Michigan Institute for Data Science Annual Symposium.