

Yutong Wang

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Education

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

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 <i>Department of EECS, University of Michigan</i> 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 ICML 2021.* <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, 2020.*

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.