Yuheng Ma

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EDUCATION

RENMIN UNIVERSITY OF CHINA   Setp 2021 -
Beijing, China
Ph.D. Student in Statistics at School of Statistics
Supervisor: Professor Hanfang Yang

NANJING UNIVERSITY   Setp 2017 - June 2021
Nanjing, China
B.Sc. in Mathematics with Honor at Kuangyaming Honors School

DUKE UNIVERSITY   Aug 2019 - Dec 2019
Durham NC, U.S.
Visiting International Student

RESEARCH INTEREST

Statistical Learning Theory; General Topics in Machine Learning; Differential Privacy.

PUBLICATIONS

* for equal contribution.

Yuchao Cai*, **Yuheng Ma***, Yiwei Dong, Hanfang Yang. Extrapolated Random Tree for Regression. *ICML 2023.*

Yuheng Ma, Han Zhang, Yuchao Cai, Hanfang Yang. Decision Tree for Locally Private Estimation with Public Data. *NeurIPS 2023.*

Yuheng Ma, Hanfang Yang. Optimal Locally Private Nonparametric Classification with Public Data. *Journal of Machine Learning Research.*

Yuheng Ma, Ke Jia, Hanfang Yang. Better Locally Private Sparse Estimation Given Multiple Samples Per User. *ICML 2024.*

WORKING PAPERS

Yuchao Cai, **Yuheng Ma**, Hanfang Yang, Hanyuan Hang. Bagged Regularized k-Distances for Anomaly Detection. *Submitted to JMLR.*

Yuheng Ma, Hanfang Yang. Locally private estimation with public features.

Yuchao Cai, **Yuheng Ma**, Hanfang Yang. Adaptive Weighted Nearest Neighbor Density Estimation.

Yuheng Ma, Hanfang Yang. Differential Privacy via Randomized Sketching.

PROJECTS

Automatic Music Generation   GitHub

Independent study project at Duke University. Supervised by Professor Sayan Mukherjee. Paper accepted by CSSC 2020 and poster won CMS-STUDC Undergraduate Poster Competition Award.

Manifold Sampling for Optimizing Nonsmooth Nonconvex Compositions with an Additive Regularization

Bachlor thesis.

PACKAGES

LPDT	Locally Private Decision Tree in Python.
NNDensity	Nearest Neighbor Based Density Estimation Methods in Python.
ExtraTree	Extrapolated Tree for Supervised Learning in Python.
RMusicdown	Music embedding in Rmarkdown using R.

AWARDS

- People's Scholarship   2018, 2019
- Scholarship of National Top-notch Student Training Pilot Program in Fundamental Sciences
                                                                                                                                        2018, 2019, 2020
- Fellowship of Exchange Program of National Top-notch Student Training Pilot Program in Fundamental Sciences ($15000 stipend)   2019
- Fellowship of Visiting International Student ($25000 stipend)   2019
- Best Presentation Award in 2019 Duke Datathon   2019
- Best Presentation Award in 2020 Summer School at School of Mathematical Science, Peking University   2020
- Scholarship for Graduate Student, Renmin University of China   2021, 2022, 2023
- Outstanding Innovative Talents Cultivation Funded Programs of RUC   2024