GANGHUA WANG

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EDUCATION

Univeristy of Minnesota, Twin Cities Aug. 2019 - present
Ph.D in Statistics *Minneapolis, MN*

Peking Univeristy Sept. 2015 - July 2019
B.S. in Statistics, Minor in Economics *Beijing, China*

EXPERIENCE

Project: Travelers Modeling Problem Nov. 2019 - Dec. 2019
Build prediction models for Peace of Mind Insurance Company *Minneapolis, MN*

- A competition held in Kaggle. Collaborated with other graduate students, ranked first in public leaderboard and second in private leaderboard.
- Created several prediction models based on the historical insurance data using Gini as a metric for fit. Boosting model outperforms others like generalized linear model and neural network.

Project: Component analysis in brain image July. 2018 - Sept. 2018
Supervised by Prof. Hongyu Zhao, Yale University *New Haven, CT*

- Extracted components from fMRI dataset using Latent Dirichlet Allocation to explore the intrinsic structure of brain.
- Studied the relationship between ADHD related neural network and components chosen by our method. Compared our results with other method like clustering and ICA, and confirmed that neural edges selected by us are predictive.

Project: Community detection with co-variates Dec. 2017 - June 2018
Supervised by Prof. Jinzhu Jia, Peking University *Beijing, China*

- Adopted a maximum likelihood estimator(MLE) based method to combine both the information from co-variates and network to detect community in stochastic block model.
- Performed a variational approximation algorithm to solve our MLE. Compared our results with state-of-the-art methods, like spectral clustering.
- Proved consistence property of both MLE and variational approximation algorithm.

Project: Low rank solution in nonconvex quadratic function Mar. 2017 - Dec. 2017
Supervised by Prof. Zaiwen Wen, Peking University *Beijing, China*

- Studied the conditions which are necessary for the global convergence of stochastic gradient descent algorithm.
- Generalized the method in *No Spurious Local Minima in Nonconvex Low Rank Problems: A Unified Geometric Analysis when constrained on a special manifold, such as unit sphere.*

HONORS AND AWARDS

Awarded by Univeristy of Minnesota, Twin Cities

Summer Research Fellowship	*2020*
School of Statistics First Year Scholarship	*2019*

Awarded by Peking University

The Academic Excellence Scholarship (3 times)	*2016 - 2018*
Fang Zheng Scholarship	*2017*
Wu Si Scholarship	*2016, 2018*
Freshman Scholarship	*2015*

TEACHING

Teaching Assistant, Univeristy of Minnesota, Twin Cities

STAT 3021 Introduction to Probability and Statistics	*Spring 2020*
STAT 3011 Introduction to Statistical Analysis	*Fall 2019*

TECHNICAL STRENGTHS

Computer Languages Python, MATLAB, R

(Last edited on March 22, 2020.)