

## HAO WANG

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### EDUCATION

#### Iowa State University

Doctor of Philosophy in Statistics

Research Assistant

Ames, Iowa

May 2023 (expect)

GPA: 3.96/4.0

#### Iowa State University

Master of Science in Statistics

Ames, Iowa

December 2019

#### Colorado State University

Bachelor of Science in Statistics

Fort Collins, Colorado

May 2018

### SELECTED PROJECTS

#### High dimensional statistical learning project at Iowa State University

Iowa, U.S.

Statistical Consultant

December 2018 – Present

- Studied the importance of women's status for child nutrition in Ghana with a Ph.D. candidate major in Nutrition
- Cleaned survey data with 5884 observations and 677 variables and created new variables of interest with R
- Determined the statistical learning model with respect to specific research questions
- Applied multivariate analysis technique like factor analysis, multivariate regression, stepwise model selection with R
- Successfully identified most significant factors/covariates corresponding to different response variables

#### Statistical consulting project at Colorado State University

Colorado, U.S.

Team Member

January 2018 - May 2018

- Worked with Dr. Johnson researching treatment effect on superficial digital flexor tendon (SDFT) injuries in horses
- Developed the longitudinal data with a linear mixed model under guide of Dr. Turk
- Analyzed variance components of the model in SAS
- Successfully found the overall quadratic trend in time, estimated horse random effect, identified non-significant treatment fixed effect and leg effect

#### SAMSI workshop at North Carolina State University

North Carolina, U.S.

Team Member

May 2017

- Worked with five undergraduates on the topic of distributionally robust Optimization for stock investment
- Processed past five-month data of 11 stocks' prices from yahoo finance with python
- Successfully determined criterion for picking investment by Modern Portfolio Theory and predicted the future profit
- Presented final report to approximately 15 professors and statistical industry professionals
- Learned useful tools of programming, version control repository and how to express and implement ideas as a team

### WORK EXPERIENCE

#### Remote Researcher at Principal Financial Group

Iowa, U.S.

Researcher

August 2019 – Present

- Worked on predicting and ranking stock returns within industrial groups using hierarchical models
- Transformed the stock returns via Gaussianized Distributional Transformation (proposed by Yifan Zhu)
- Developed linear mixed effect model, fitted by moment based estimation (package 'mbest')
- Defined the benchmark and model evaluation procedure

#### Research Assistant at Iowa State University

Iowa, U.S.

Research Assistant

January 2019 – Present

- Worked on the research question about the structure of the complex web of molecular interactions in living cells
- Applied novel method c-level Partial Correlation Graphs on high-dimensional gene co-expression data
- Determined the performance metric, studied real dataset and set up simulation study to assess the performance of different methods
- Enhanced the test power to 90% and controlled false positive rate at 5%

#### Statistics Success Center at Colorado State University

Colorado, U.S.

Undergrad Teaching Assistant (for 200 and 300 level courses)

September 2017 – May 2018

- Duties includes helping fellow students better comprehend statistical concepts, explained difficult homework problems
- Gained greater understanding of statistics and got more familiar with statistical terms and methods

### ORGANIZATIONS

#### STATers

Member

Iowa State University

September 2018 - Present

#### Student Dance Club

President

East China Normal University

February 2015 - June 2016

### SKILLS/QUALIFICATIONS

- Proficient in Statistics & Math & Data structure & Computer Algorithm through academic coursework
- Skillful in using R & SAS & Java programming
- Familiar with Python, SQL, MATLAB, Tableau and Microsoft Office (Word, Excel, PPT)
- Fluent in Chinese and English (written and verbal)