# JIAYI WANG

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## EDUCATION

**Texas A&M University**                                                                          *Aug 2017 - Present*
Ph.D. in Statistics                                                                                    (GPA: 4.00/4.00 )
Advisor: Dr. Raymond K.W. Wong

**Zhejiang University, China**                                                                 *Jul 2013 - Jun 2017*
B.S. in Statistics                                                                                      (GPA: 3.94/4.00 )

## AWARDS AND HONORS

· Emanuel Parzen Graduate Research Fellowship Award                                               2021
  *Texas A&M University*
· Best Student's Paper Award                                                                               2020
  *Section on Nonparametric Statistics, American Statistical Association(ASA)*

· Excellent Student                                                                                          2017
  *Zhejiang University*

· Endeavour Cheung Kong Student Exchange Program Awards                                            2016
  *University of Melbourne*

· National Scholarship                                                                                       2014
  *Zhejiang University* (2% winning rate)

## PUBLICATIONS

· **Jiayi Wang**, Raymond K.W. Wong, Xiaojun Mao, and Kwun Chuen Gary Chan. (2021+). Matrix Completion with Model-free Weighting. *International Conference on Machine Learning (ICML)*. Link

· **Jiayi Wang**, Raymond K.W. Wong, and Xiaoke Zhang. (2021+). Low-rank Covariance Function Estimation for Multidimensional Functional Data. *Journal of the American Statistical Association*. Link

## PREPRINTS

· **Jiayi Wang**, Zhenglin Qi, and Raymond K.W. Wong. (2021). Projected State-action Balancing Weights for Offline Reinforcement Learning. *arXiv*. Link

· **Jiayi Wang**, Raymond K.W. Wong, Shu Yang, and Kwun Chuen Gary Chan. (2021). Estimation of Partially Conditional Average Treatment Effect by Hybrid Kernel-covariate Balancing. *arXiv*. Link

· **Jiayi Wang**, Raymond K.W. Wong, Mikyoung Jun, Courtney Schumacher, R Saravanan, and Chunmei Sun. (2021). Statistical and Machine Learning Methods Applied to the Prediction of Different Tropical Rainfall Types. *Earth and Space Science Open Archive (ESSOAr)*. Link

## TEACHING

**Instructor**
*Texas A&M University*

· Stat 201: Elementary Statistical Inference                                          Summer 2021

  – Responsible for designing courses and exams, giving lectures, assigning grades and supervising the teaching assistant.

**Teaching Assistant**
*Texas A&M University*

· Stat 614: Probability for Statistics (graduate level)                                     Fall 2021
· Stat 648: Applied Stat & Data Analysis (graduate level)                               Spring 2021
· Stat 612: Theory of Linear Models (graduate level)                               Fall 2020, Fall 2021
· Stat 404: Statistical Computing                                                       Spring 2020
· Stat 211: Principles of Statistics I                                          Fall 2017, Spring 2018

## PROFESSIONAL EXPERIENCE

**Internship**

· Data Scientist Internship                                                          Summer 2020
*Modeling & Optimization, Amazon*

  – Constructed a predictive model for the late deliveries via Catboost and neural network modeling.
  – The predictive model is applied to the European delivery system to improve customer service.

**Research**

· Research Assistant                                                             Jun 2018 - present
*Department of Atmospheric Sciences, Texas A&M University*

  – Explored multiple data compression methods, including principle component analysis, auto-encoder, sufficient dimension reduction to interpret high-dimensional atmospheric variables.
  – Explored various machine learning methods (random forest, lightGBM, and deep learning) to model tropical rain occurrence and rain amount.
  – Compared statistical models (generalized linear models) and machine learning methods in characterizing the tail of rain amount density.

· Global Engagement in Academic Research (GEAR)                                        Summer 2016
*Department of Accounting, North Carolina State University*

  – Developed time series models to analyze and predicted the frequency of data breach.
  – Developed a Bayesian linear model to evaluate the size of data breach.

## PRESENTATIONS

· Low-rank Covariance Function Estimation for Multidimensional Functional Data          Fall 2022
*Causality inference & Missing data analysis group, North Carolina State University*

· Matrix Completion with Model-free Weighting                                         Summer 2021
*Poster presentation, International Conference on Machine Learning (ICML)*

· Low-rank Covariance Function Estimation for Multidimensional Functional Data         Spring 2021
*Stat Cafe at the Department of Statistics, Texas A&M University*

· Low-rank Covariance Function Estimation for Multidimensional Functional Data         Summer 2020
*Student paper award talk, Joint Statistical Meetings (JSM)*

· Analysis of Characteristics of Data Breach                                      Summer 2016
  *GEAR poster presentation, North Carolina State University*

## RESEARCH INTERESTS

· Functional Data
· Low-rank Modeling
· Causal Inference
· Reinforcement Learning

## TECHNICAL STRENGTHS

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|---|---|
| **Languages** | Mandarin, English |
| **Softwares & Tools** | R, Python, C, Matlab, SQL, LaTeX |