JIZHOU KANG

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EDUCATION

University of California, Santa Cruz **Sep 2019 - Exp. Jun 2024**
Ph.D. Candidate in Statistical Science *Santa Cruz, CA*

- Research Interest: Bayesian nonparametrics; Ordinal regression; High-dimensional data; Longitudinal data.

Johns Hopkins University **Aug 2016 - Jan 2018**
M.S.E. in Financial Mathematics *Baltimore, MD*

- Overall GPA: 3.94/4.00
- Teaching Assistant: Applied Statistics and Data Analysis (graduate level), Probability and Statistics.

Xi'an Jiaotong University **Aug 2012 - Jun 2016**
B.S. in Honors Math Program *Shaanxi, China*

- Xi'an Jiaotong University Siyuan Scholarship for academic performance(2013,2015)
- Everest Scholarship for distinguished research assistant, 2nd Prize (2015)

WORKING EXPERIENCE

University of California, Santa Cruz **Mar 2021 - Aug 2021**
Online course developer/instructor *Santa Cruz, CA*

- Took full responsibility for the *Coursera* course *Bayesian Statistics: Capstone Project*.

Center of Complex Decision Analysis, Fudan University **May 2018 - Aug 2019**
Researcher and data analyst *Shanghai, China*

- Collaborated with social scientists and economists to develop and implement statistical models that assist decision making in business, investing and planning.

HONORS AND AWARDS

2022 Travel Award, 13th International Conference on Bayesian Nonparametrics
2022 Student Paper Award, Section on Bayesian Statistical Science of the ASA
2021 Dean's Travel Grant, University of California, Santa Cruz
2019 Regents' Fellowship, University of California, Santa Cruz

PRINCIPAL RESEARCH PROJECT

Nonparametric Bayesian Mixture Modeling for Ordinal Regression

- Aimed at depicting heterogeneity patterns observed in real ordinal data analysis problems, such as consumers' attitude studies and companies' credit rating evaluations.
- Developed a novel methodology that can capture complex ordinal regression relationships while keeping neat and efficient computation.
- Demonstrated the benefits of the proposed methodology over the competing methods with several synthetic and real data examples.

Fully Nonparametric Bayesian Models for Longitudinal Ordinal Data

- Motivated by the lack of tools in analyzing real-time ordinal data captured via electronic wearable devices.

- Proposed a flexible modeling framework that simultaneously overcome the heterogeneity and missingness difficulties, with tractable inference algorithm.
- Applied the model to a real application problem with college students' responses to mental health questionnaires pop up on their mobile phones.

Bayesian Inference for Complex Mathematical Model

- Worked on a new calibration method designed for Gaussian process emulators for complex computer models with uncertainty quantification.
- Researched on finding appropriate prior: exploring subjective prior, deriving reference prior, and proving propriety of the prior distributions.
- Tested validation of new method by solving a real calibration problem for volcano model and compared with other existing methods.

For more on my research and class projects, please refer to `https://jkang37.github.io/`.

CONFERENCE PRESENTATIONS

Oct 2022	Contributed Presentation, 13th International Conference on Bayesian Nonparametrics
Aug 2022	Topic-contributed Presentation, Joint Statistical Meetings
May 2022	Contributed Presentation, UCSC Postdocs Association Annual Research Symposium
Jun 2021	Contributed Presentation, ISBA World Meeting

SUMMARY OF TECHNICAL STRENGTH

Programming Skills	◇ Coded data analysis methods from basis in R and Python. ◇ Used SQL commands to extract and manipulate data. ◇ Earned certificates in using Hadoop platform from *Coursera*.
Theoretical Knowledge	◇ Developed machine learning algorithms in classes and research projects. ◇ Applied statistical method to conduct causal inference.
Related Experience	◇ Team-worked with people to solve data-driven problems. ◇ Conveyed quantitative result to people with few related knowledge.