

# Kevin Christian Wibisono

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## Research Interests

- Transformers and in-context learning
- Causal inference with text data
- Regression discontinuity designs

## Education

### University of Michigan

Ann Arbor, MI, USA

PH.D. IN STATISTICS (GPA: 4.00/4.00)

2021 - 2026 (expected)

- Supervised by Yixin Wang, Ph.D.
- Received the *Rackham International Student Fellowship* for demonstrating exceptional academic and professional promise.

### Columbia University

New York, NY, USA

M.S. IN DATA SCIENCE (GPA: 4.00/4.00)

2019 - 2020

- Capstone project: *Improving Automatic Event Understanding Through Sequential and Non-sequential Deep Learning Architectures* (supervised by Yuval Marton, Ph.D. and Asad Basheer Sayeed, Ph.D.).

### National University of Singapore

Singapore

B.SC. (FIRST CLASS HONORS) IN APPLIED MATHEMATICS AND STATISTICS (GPA: 4.90/5.00)

2015 - 2019

- Honors thesis: *Approximate Solutions to the Multivariate Behrens-Fisher Problem* (supervised by Zhang Jin-Ting, Ph.D.).
- Completed the *Special Programme in Mathematics*, a program specially designed for students with a strong passion and aptitude for mathematics.
- Received the *Ho Family Prize* as the best student in Applied Mathematics.

## Publications

### ACCEPTED

Wibisono, K. C. and Wang, Y. (2023). *On the Role of Unstructured Training Data in Transformers' In-Context Learning Capabilities*. NeurIPS Workshop on Mathematics of Modern Machine Learning.

Wibisono, K. C. and Wang, Y. (2023). *Bidirectional Attention as a Mixture of Continuous Word Experts*. Uncertainty in Artificial Intelligence (acceptance rate: 31%).

### UNDER REVIEW

Ignaccolo, C., Wibisono, K. C., Plunz, R., and Sutton, M. *Tweeting During the Pandemic in New York City: Unveiling the Evolving NYC's Sentiment Landscape Through a Spatiotemporal Analysis of Geolocated Tweets*.

### IN PREPARATION

Wibisono, K. C., Mukherjee, D., Banerjee, M., and Ritov, Y. *Estimation of Non-randomized Heterogeneous Treatment Effects in the Presence of Unobserved Confounding Variables*.

## Teaching Experience

### RESEARCH MENTOR, University of Michigan

#### 1. Undergraduate Research Program in Statistics (URPS)

Winter 2024

- Supervise two undergraduate students in a research project on investigating language models' abilities to encode geographical information.

## GRADUATE STUDENT INSTRUCTOR, **University of Michigan**

1. *STATS 306: Introduction to Statistical Computing* (upper undergraduate level) Fall 2023
  - Designed and taught weekly lab sections (~40 students), held office hours, prepared and graded homework, and graded exams.
2. *STATS 206: Introduction to Data Science* (lower undergraduate level) Fall 2022 and Winter 2023
  - Taught weekly lab sections (~40 students), held office hours, and graded homework and exams.
3. *STATS 415: Data Mining and Statistical Learning* (upper undergraduate level) Winter 2022
  - Designed and taught weekly lab sections (~40 students), held office hours, and graded homework and exams.
4. *STATS 250: Introduction to Statistics and Data Analysis* (lower undergraduate level) Fall 2022
  - Taught weekly lab sections (~40 students), held office hours, and graded homework and exams.

## TEACHING ASSISTANT, **Columbia University**

1. *INAF U6614: Data Analysis for Policy Research Using R* (graduate level) Fall 2020
  - Designed and taught weekly lab sections (~20 students), developed course website, held office hours, and graded homework and projects.
2. *CSOR W4231: Analysis of Algorithms* (upper undergraduate/graduate level) Spring 2020
  - Held office hours, and graded homework and exams.

## TEACHING ASSISTANT, **National University of Singapore**

1. *MA1512: Differential Equations for Engineering* (lower undergraduate level) AY 2018/19 Semester 2
  - Designed and taught weekly tutorial classes (~60 students), and held office hours.
2. *MA1100: Fundamental Concepts of Mathematics* (lower undergraduate level) AY 2018/19 Semester 1
  - Designed and taught weekly tutorial classes (~60 students), held office hours, and graded exams.

## Work Experience

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### **Walmart**

Bentonville, AR, USA

#### DATA ANALYST 2 (JUNIOR DATA SCIENTIST)

Feb - Jun 2021

- Enhanced Sam's Club fraud detection system via model stacking and improved feature engineering, resulting in a reduction of approximately 30% in financial losses.

#### DATA SCIENTIST INTERN

Jun - Aug 2020

- Adapted natural language processing techniques to develop item-scoring algorithms aimed at guiding each club's price investment decisions, and implemented them using PySpark.

### **Portcast**

Singapore

#### DATA SCIENTIST INTERN

May - Aug 2018

- Developed methods for improving cargo demand forecasting models for several prominent global shipping companies, and implemented them using Python.

### **Centre for Social Development Asia, National University of Singapore**

Singapore

#### RESEARCH INTERN

May - Aug 2017

- Collaborated with a multidisciplinary team of undergraduate students to analyze the state of charity governance in Singapore, resulting in the publication *An Overview of Charity Governance in Singapore*.

### **Traveloka**

Jakarta, Indonesia

#### DATA ANALYST INTERN

May - Jul 2016

- Developed SQL dashboards to summarize the effectiveness of organic searches in generating hotel sales.

## Awards

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- 2023 **Rackham International Student Fellowship**, University of Michigan
- 2020 **Top 1.5%**, Baidu and Xi'an Jiaotong University International Big Data Competition
- 2019 **Second Runner-Up**, Columbia University Data Science Hackathon  
**Ho Family Prize (Best Applied Mathematics Graduate)**, National University of Singapore
- 2017 **Top 250**, William Lowell Putnam Mathematical Competition  
**First Runner-Up**, ALMA College Mathematics Challenge  
**Eighth Place**, Virginia Tech Regional Mathematics Contest
- 2015 **Undergraduate Scholarship (Full Funding)**, Singapore Ministry of Foreign Affairs
- 2014 **Silver Medal**, Asian Pacific Mathematics Olympiad
- 2013 **Bronze Medal**, International Mathematical Olympiad  
**Silver Medal**, Asian Pacific Mathematics Olympiad
- 2009 **Satyalancana Wira Karya (Medal for Providing an Example of Meritorious Personality)**,  
Government of the Republic of Indonesia

## Presentations and Posters

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### PRESENTATIONS

- 2023 **Joint Statistical Meetings**, Toronto, ON, Canada

### POSTERS

- 2023 **NeurIPS Workshop on Mathematics of Modern Machine Learning**, New Orleans, LA, USA
- 2023 **Michael Woodroffe Memorial Conference**, Ann Arbor, MI, USA
- 2023 **Uncertainty in Artificial Intelligence (UAI)**, Pittsburgh, PA, USA
- 2023 **ICSA Applied Statistics Symposium**, Ann Arbor, MI, USA
- 2023 **Midwest Machine Learning Symposium**, Chicago, IL, USA

## Outreach and Professional Development

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### SERVICE AND OUTREACH

- 2023 **Neural Information Processing Systems**, Volunteer
- 2023 **ICSA Applied Statistics Symposium**, Volunteer
- 2021 - 2022 **University of Michigan Indonesian Society**, Events Director
- 2020 **Columbia University Data Science Institute**, Student Ambassador and Mentor
- 2019 - 2020 **Columbia Indonesian Society**, Assistant Vice President of Training and Development
- 2015 - 2017 **NUS-British Petroleum Mentoring**, Treasurer and Mentor

### CONFERENCES REFEREED

- 2023 - 2024 **Artificial Intelligence and Statistics (AISTATS)**

## Computing Skills

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- Proficient in Python, R, and SQL.