PIN-CHIAN (CATHY) LEE

202-603-0765 | pin.chian.lee@duke.edu
www.linkedin.com/in/pin-chian-cathy-lee

EDUCATION

Duke University, Durham, North Carolina

- PhD in Statistical Science — Expected May 2026
  - Relevant Courses: Probabilistic Machine Learning, Hierarchical Models, Predictive Modeling, Statistical Inference, Statistical Decision Analysis, Study Design, Applied Stochastic Processes
- Bachelor of Science in Statistics and minor in Mathematics — May 2021
  - Faculty Scholars Nominee 2020
  - Dean's Summer Research Fellow 2020

RESEARCH

Uncovering Social Identity Biases in the Perceived Humanity of Online Profiles — May 2024-Present

Work with Alexander Volfovsky (advisor), Christopher Bail, and Sunshine Hillygus

- Conducted (designed, rolled out, and analyzed) a conjoint experiment to examine on whether social media users rate users from a different demographic subgroup as bots more often than they do users from their own demographic subgroup. Manuscript in preparation.

Sharp Bounding Null Effects in Causal Experiments with Ordinal Outcomes — July 2023-Present

Work with Alexander Volfovsky (advisor)

Proved sharp lower and upper bounds on the probability of a null effect in binary treatment causal experiments with ordinal outcomes. Proved how incorporating prior information on treatment efficacy changes the lower bound. Manuscript in preparation.

Spatial Divide and Conquer for Bayesian High-Dimensional Binary Outcome Models — Sep 2022-Present

Work with David Dunson

- Proposed a computationally efficient divide and conquer method to fit Bayesian hierarchical models on spatially correlated data with high-dimensional binary outcomes. Applied method to analyzing bird species presence/absence data. Manuscript in preparation.

PRESENTATIONS

International Society for Bayesian Analysis World Meeting — July 2024

- Presented poster "Spatial Divide and Conquer for Bayesian High-Dimensional Binary Outcome Models"

WORK EXPERIENCE

Analytics Assistant — Aug 2018-May 2021

Fuqua School of Business

- Tailored course assignments to student interests for Dr. Jonathan Cummings by analyzing student survey data using machine learning clustering and classification.

Analytics Intern — May 2019-Aug 2019

Duke Libraries

- Provided Duke Libraries with new tools to help negotiate with publishers and optimize journal selection by building a pipeline for web scraping, querying APIs, data cleaning, and R Shiny dashboard display.

Analytics Intern — May 2018-Aug 2018

Giving to Duke

- Increased fundraising efficiency by triaging 18,000+ donors based on donation affinity and identified donors for underfunded initiatives by topic modeling 65,000+ fundraiser-donor conversation transcripts.

TEACHING EXPERIENCE

STA 211 Mathematics of Regression, *Head Teaching Assistant* — Aug 2022-Dec 2022

STA 210 Regression Analysis, *Head Teaching Assistant* — Jan 2023-May 2023

STA 644 Spatiotemporal Statistics, *Teaching Assistant* Aug 2023-Dec 2023
STA 440 Case Studies, *Teaching Assistant* Jan 2024-May 2024
STA 360 Bayesian Statistics, *Teaching Assistant* Aug 2021-Dec 2021
STA 221 Regression Analysis: Theory and Applications, *Teaching Assistant* Jan 2025-May 2025

SKILLS

Statistical Coursework

- Causal Inference, Experimental Design, Spatial Statistics

Programming/Computing

- R, Python, SQL, cluster computing (SLURM)