Jasper Yang

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Research interests

Electronic health records, epidemiological methods, decision theory
Bayesian methods, causal inference, health policy

Education

University of Essex Colchester, UK
MSc in Statistics *September 2022 - Present*

Grinnell College Grinnell, Iowa
BA in Biology, Statistics concentration *August 2017 - December 2021*

Research experience

Kaiser Permanente Washington Health Research Institute
Research Assistant, Full-time, Mentor: Pamela Shaw *June 2021 – August 2022*

- Assisted with statistical projects in measurement error, nutritional epidemiology, and electronic health records.

Perelman School of Medicine at the University of Pennsylvania, Department of Biostatistics, Epidemiology, and Informatics
Research Assistant, Full-time, Mentor: Pamela Shaw *Sep. 2020 – June 2021*

- Conducted statistical analysis of data collected from electronic health records (EHR) to investigate risk factors associated with the competing risks of death and discharge among patients hospitalized with COVID-19. Methods included Cox proportional hazards regression, multi-state survival models, and multivariable Poisson regression.
- Developed the R package 'optimall' for efficient multi-wave sampling in R. Collaborated with a research group funded by PCORI grant HSRP20181639, which studied measurement error in the collection of electronic health records.
- Assisted statistical team of RCT for convalecent plasma COVID-19 treatment.

Grinnell College Biology Department
Research Assistant, Mentor: Vida Praitis *May 2020 – August 2020*

- Led statistical analysis of scRNA-seq data in *C. elegans embryogenesis* using R with Bioconductor.
- Presented findings in complete research paper.

Boston University School of Public Health, Summer Institute in Biostatistics

Trainee, Program Directors: Anita DeStefano and Jacqueline Milton — *June 2019 – July 2019*

- Conducted and presented a collaborative research project using PLINK software to analyze the GAW data set.
- Analyzed data collected from the Framingham Heart Study and Jackson Heart Study using SAS and R.

Grinnell College Global Learning Program

Mentors: Shannon Hinsa and Susan Ferguson — *January 2018 – June 2018*

- Travelled to Costa Rica, Cuba, and Denmark to gather data for individual research project, a comparative analysis of the EMS systems of Costa Rica, Cuba, and the U.S.

Other relevant experience

Emergency Medical Technician — *October 2015-June 2017*

- State certified EMT-basic in Massachusetts.
- Responded to emergency calls in Bolton, MA as a volunteer.

Publications

Published Manuscripts

1. Bar K, Shaw P, Choi G, Aqui N, Fesnak A, **Yang JB**, Soto-Calderon H, Grajales L, Starr J, Andronov M, Mastellone M, Amonu C, Feret G, DeMarshall M, Buchanan M, Caturla M, Gordon J, Wanicur A, Monroy MA, Mampe F, Lindemuth E, Gouma S, Mullin A, Barilla H, Pronina A, Irwin L, Thomas R, Eichinger R, Demuth F, Prak E, Pascual JL, Short W, Elovitz M, Baron J, Meyer N, Degnan K, Frank I, Hensley S, Siegel DL, Tebas P. *A randomized, controlled, phase 1 study of convalescent plasma for individuals hospitalized with COVID-19 pneumonia. Journal of Clinical Investigation,* (2021). https://doi.org/10.1172/JCI155114

2. Shaw PA, **Yang JB**, Mowery DL, Schriver ER, Mahoney KB, Bar KJ, Ellenberg SS. *Determinants of COVID-19 Hospital Outcomes in the University of Pennsylvania Health System. PlosOne,* (2022). https://doi.org/10.1371/journal.pone.0268528.

Submitted Manuscripts

3. Yang JB, Shepherd BE, Lumley T, Shaw PA. *Efficient Multi-Wave Sampling with the R Package optimall* (Submitted). Pre-print arXiv:2106.09494.

Abstracts

1. Shaw PA, **Yang JB**, Mowery DL, Schriver ER, Mahoney KB, Ellenberg SS, Bar KJ. *Determinants of COVID-19 Hospital Outcomes in a Large Pennsylvania Health System.* Conference of Retroviruses and Opportunistic Infections, March 2021.

2. Yang JB, Kopf SN, Naik SM, Praitis V. *Investigating mechanisms of cell migration in C. elegans through a large single-cell RNA expression dataset.* International C. elegans Conference, June 2021.

Presentations

Design and Implementation of Multi-Wave Sampling Surveys in R *August 2021*
American Statistical Association Joint Statistical Meetings (JSM) 2021

Efficient multi-wave sampling with the R package 'optimall' *July 2021*
UseR! Conference 2021

A comparative Transcriptomic Analysis of Cell Migration in C. elegans *June 2021*
International C. elegans Conference 2021

Determinants of COVID-19 Outcomes in the University of Pennsylvania Health System *March 2021*
University of Pennsylvania Department of Biostatistics, Epidemiology, and Informatics Research Day 2021

EMS in the Americas *April 2019*
Grinnell College Undergraduate Research Symposium

Software

optimall: An R package to efficiently conduct multi-wave sampling under two- or three-phase designs. Accompanied by a Shiny app for viewing the effect of splitting strata on optimum sample allocation. Package currently available on Github (https://github.com/yangjasp/optimall) and CRAN (https://CRAN.R-project.org/package=optimall) .

Honors and scholarships

NSF Graduate Research Fellowship *2022*

CoSIDA Academic All-America Player of the Year, Men's Soccer *2021*
Grinnell College, Grinnell, IA

United Soccer Coaches Scholar All-American *2021*
Grinnell College, Grinnell, IA

Honor G Scholar Award *2021*

Grinnell College, Grinnell, IA

Morgan Taylor '26 Award *2021*
Grinnell College, Grinnell, IA

CoSIDA Academic All-American, Men's Soccer (3x) *2019, 2020, 2021*
Grinnell College, Grinnell, IA

NHLBI Summer Institute in Biostatistics Scholarship *2019*
Boston University School of Public Health, Boston, MA

Grinnell College Dean's Scholarship *2017*
Grinnell College, Grinnell, IA

Computing Skills

R, RMarkdown, Python, Git, Latex.