CHEN CHEN

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EDUCATION:

PhD in Biostatistics, University of Toronto — Nov 2026
Master of Science (MS) in Biostatistics, University of Michigan — April 2022
Master of Arts (MA) in Economics, San Francisco State University — May 2017
Bachelor of Arts (BA) in Economics, San Francisco State University — August 2015

PUBLICATION

Peer-reviewed

2022 Chen, C., Haupert, S. R., Zimmermann, L., Shi, X., Fritsche, L. G., & Mukherjee, B. (2022). Global Prevalence of Post COVID-19 Condition or Long COVID: A Meta-Analysis and Systematic Review. The Journal of Infectious Diseases.

2022 Haupert, S. R., Shi, X., Chen, C., Fritsche, L. G., & Mukherjee, B. (2022). A Case-Crossover Phenome-wide Association Study (PheWAS) for Understanding Post-COVID-19 Diagnosis Patterns. Journal of Biomedical Informatics, 104237.

2018 Chen C. & Modrek S. (2018). Gendered impact of solid fuel use on acute respiratory infections in children in China. BMC public health, 18(1), 1170.

TECHNICAL SKILLS:

- Programming languages: R, Stata, Python, SAS, Matlab, SQL
- Statistical techniques: Joint model, Longitudinal Analysis (GEE, LMM, GLMM), Bayesian inference, Survival Analysis (Proportional hazard, AFT, competing risk), Structural Equation Modeling, Propensity Score Matching, Missing Data with Multiple Imputation, Time Series Analysis (ARIMA, VAR, GARCH, TBAT), Regression Analysis, Meta-analysis

RESEARCH EXPERIENCE

Graduate Student Research Assistant
Biostatistics Department, University of Michigan — Nov 2021– April 2022
Assistantship with Dr. Michael Elliot and Dr. Zhenke Wu

- Developing joint model for time-to-event and longitudinal data under Bayesian framework
- Analyzing data from the Study of Women's Health Across Nation (SWAN) to investigate how hormone level influence time to onset of diabetes
- Constructing simulation study to evaluate the performance of the joint model

Research Assistant
Biostatistics Department, University of Michigan — May 2021– Nov 2021
Assistantship with Dr. Bhramar Mukherjee

- Screened 4438 papers to conduct systematic review and performed meta-analysis to understand prevalence of post-acute sequelae of COVID-19
- Conducted phenome wide association studies (PheWAS) to investigate potential prognostic factors and risk factors for long COVID
- Integrated and processed EHR data for research purpose

Research Data Analyst
Center for Population Health Sciences, Stanford University — Jan 2019 – Jan 2020

- Collaborated with Stanford faculty to produce research projects and peer-reviewed journal articles related to the study of environmental health, social determinants of health, and healthy aging
- Managed, integrated, and cleaned complex data from myriad sources including administrative records, federally funded population-based surveys, and clinical data
- Led analytical efforts for projects through statistical modeling of complex data including survival analysis, proportional hazard model, and structural equation model.
- Established reproducibility by creating reports detailing the research process and data documentation

Data Analyst and Coordinator
National Bureau of Economic Research Nov 2017 - Jan 2019

- Collaborated with researchers at multiple institutions to clean and organized data files, documented the process to ensure reproducibility, and coordinated code exchange
- Improved data quality by identifying and excluding problematic data
- Performed statistical analysis appropriate for complex data and produced associated graphs and tables with Stata and SAS
- Conducted literature reviews on relevant topics in the public health and economics fields

Research Assistant,
San Francisco State University
Assistantship with Dr. Emma Sanchez-Vaznaugh May 2018-June 2018

- Compiled and interpreted quantitative and statistical data in the investigation of policy effects on child health outcomes.
- Implemented statistical analyses in R, including the development of code for descriptive and inferential statistics, as well as multilevel models, summarize data, prepare tables, graphs, and maps to depict research findings

Assistantship with Dr. Anoshua Chaudhuri Feb 2016-May 2017

- Conducted extensive literature review in Microeconomics, health and gender economics
- Initialized first trial to collect 500 quantitative and qualitative individual data about transnational caregiving among H1B workers through Amazon Mechanical Turk
- Used Stata and R to analyze data clusters, developed custom algorithms to efficiently streamline the data visualization process and eliminated spurious data to enhance data quality

Assistantship with Dr. Venoo Kakar Sep 2016-Dec 2016

- Conducted literature review for Fragile Families paper to understand the racial differences of marriage transition among female
- Forecasted the usage of electronic toll tag, Fastrak, at 8 bridges in the Bay Area using R to evaluate the effect of discount policy

TEACHING EXPERIENCE

Teaching Assistant, University of Toronto Sep 2022 - Present

- Hold tutorial session to help student review previous lecture topics and practice exercise
- Grade assignments and provide additional support requested by students

Graduate Assistant, San Francisco State University Sep 2015-May 2017

- Assisted multiple professors on grading and course preparation each semester
- Provided additional tutoring support and office hours to students
- Lectured review sessions before the midterm to a large class (over 100 students)

COURSE RESEARCH PROJECT WITH PRESENTATION

2022 BIOSTAT 699 Analysis of Biostatistical Investigation
Project 1: Impact of tobacco promotion on tobacco use among youth in Mumbai
Project 2: Could tumor growth decrease after TRIP 13 was reduced by doxycycline treatment? A randomized controlled trail study
Project 3: Prognostic value of G-score in Squamous Cell Carcinoma of Head and Neck (SCCHN): a Time-to-event Analysis
Project 4: Power Estimation and Study Design of RNA-seq Analysis in Gene Expression Studies

2022 BIOSTAT 629 Case Studies in Health Big Data
Using Daily Sleep Quality to Predict Moderate to Severe Depression: A Two-Stage Approach

2021 BIOSTAT 653 Theory and Application of Longitudinal Analysis
Impact of partner relationship on sleep quality for midlife women: A longitudinal study

2021 BIOSTAT 620 Introduction to Health Data Science
Intervention on Screen Use Activity: A Randomized Crossover Trial: The objective of this study was to explore mobile devices usage pattern and how intervention can alter individuals' screen usage.

2020 BIOSTAT 650 Theory and Application of Linear Regression
The Effect of Physical Activity on the Risk of Poor Sleep Quality among US Adults

2016 ECON 840 Health Economics Analysis and Research with Dr. Anoshua Chaudhuri
Children's Oral Health in San Francisco: collaborated with Chinatown Task Force and NICOS, we report the demographic information about children's oral health in San Francisco area and find that the caries rate is highly correlated with poverty level and linguistic isolation rate.
2015 ECON 825 Applied Time Series Econometrics with Dr Venoo Kakar
Pro-cyclical mortality: a look into the relationship between mortality and unemployment rates in the United States
2015 ECON 731 Econometric Theory with Dr Venoo Kakar
Factors associate with suicide Rate: Analysis for veterans and non-veterans

HONORS AND REWARDS

2018 **Health Equity Institute Student Scholar**, Health Equity Institute at San Francisco State University
2018 **Public Health Advocate**, Career Valor
2017 **President's Leadership Fellow**, San Francisco State University
2016 **Don Scoble Scholarship**, Economics Department of San Francisco State University

CERTIFICATES:

2019 **ICME Fundamentals of Data Science Summer Workshops**, Stanford Institute for Computational and Mathematical Engineering
2019 **Machine Learning**, Stanford Coursera
2016 **IMFx: Macroeconometric Forecasting**, IMFx Coursera

COMMUNITY SERVICE

2021 Student judge for Epidemiology digital poster session
2021 Mentoring three 1st year graduate students at biostatistics department, University of Michigan
2021 Statcom at University of Michigan Luella Hannan Memorial Foundation
2021 DEI student committee at University of Michigan biostatistics department
2019 Volunteer, 16th Annual Dad & Me @ the Park, County of San Mateo Human Services
2018 Volunteer, Women in Data Science at San Francisco State University
2017 Volunteer, 4TH Annual Restorative Justice – Reentry, Survivors Speak Conference & Resource Fair
2015 Volunteer, Physician Organization Committee

ADDITIONAL INFORMATION

Languages: Chinese(fluent), English(fluent)