

# DEJI SUOLANG

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## EDUCATION

- Aug 2018 - Apr 2020      **M.S. in Survey Methodology**  
University of Michigan - Ann Arbor, Ann Arbor, MI
- Sept 2014 - Jul 2018      **B.A. in Sociology**  
Nanjing University, Nanjing, China
- Feb 2017 - Jun 2017      **Exchange Program**  
Utrecht University, Utrecht, Netherlands

## WORK EXPERIENCE

- Jun 2020 - Current      **Research Assistant**, Johns Hopkins Medicine, Baltimore, MD
- Design sampling methodologies, survey instruments and data management procedures for evaluation studies that target specific health populations, health care providers and institutions, in consultation with PI
  - Manage and execute analyses of complex datasets derived from patient-or provider-generated health survey and electronic health record, write analysis plans, select analytical methods given the study objectives
- Sept 2018 - Apr 2020      **Research Associate**, Institute for Social Research, Ann Arbor, MI
- Created analytic datasets by synthesizing data from multiple sources, conducted and interpreted quantitative data using multivariate technique and advanced statistical approach
  - Assisted with all aspects of the large-scale national survey projects and the IRB submission
  - Performed literature searches, developed written reports, infographics, briefings and ad hoc analysis to summarize research findings, and turned them to the publications
- Jan 2020 - Apr 2020      **Survey Consultant**, NumFOCUS, Austin, TX
- Designed and programmed a survey to evaluate Python-NumPy users and open source projects community
  - Developed strategies to handle sampling selection bias, missing data, data security and confidentiality
- Jun 2018 - Aug 2018      **Data Analyst Intern**, National Bureau of Statistics, Lhasa, Tibet
- Maintained database, employed data visualization tools to detect discrepancies and display analysis procedure
  - Developed multilevel models to evaluate the changes in economic indicators over the years in different regions
- Dec 2016 - Jan 2017      **Research Analyst Intern**, Center for Disease Control and Prevention, Lhasa, Tibet
- Assisted PI with data management and analysis about the prevalence and mortality of hydatid disease
  - Conducted routine data refresh and update, determinized data/information needs, developed complex tools for electronic data collection, and provided user training, support, and documentation

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## RESEARCH EXPERIENCE

- 2020-Current     **Racial Differences in Stroke Care in U.S. Hospitals**, Baltimore, MD
- Extract and manipulate administrative data from National Inpatient Sample from 2012-2017
  - Employ logistic regression model to evaluate intracerebral hemorrhage and ischemic stroke differs between hospitals serving varying proportions of minority patients
- 202-Current     **End-of-life Care Perceptions and Preferences Among Surrogates Decision-Makers**, Baltimore, MD
- Develop comprehensive survey instruments and research protocol to assess surrogates' knowledge, attitudes and decision-making process for the patient with severe stroke at Johns Hopkins Hospital
  - Extract data/information on targeted variables from patients' medical chart, routine data refresh and checking
- 2020-Current     **Implicit Bias Among SLP in Clinical Decision-Making Regarding PEG-tube Placement**, Baltimore, MD
- Designed a discrete choice experiment to evaluate physicians implicit bias on dysphagia patients, tested and improved the exiting survey instrument
  - Proposed raw data re-coding methodologies and statistical analysis plan
- 2020     **User Experience Evaluation for Starboard.Corp**, Traverse City, MI
- Conducted a series of UX research for a supply chain game simulation tool, improved the user experience to optimize network and compare cost differences
- 2019-2020     **American Family Health Study**, Ann Arbor, MI
- Transited the NSFG questionnaire to a modular web survey, performed survey testing and managed questionnaire revisions throughout the testing cycle
  - Conducted full design-based analyses and programmed SAS codes to draw matched sample for comparison.
  - Visualized key statistics comparison between NSFG and hypothetical estimates with R programming
- 2019     **Presidential Election Trends Prediction with Web Data**, Ann Arbor, MI
- Scaped data from gambling website, Twitter API and Google search, cleaned/coded organic data with R
  - Employed sentiment analysis and linear regression to predict the election trends, visualized analysis results
- 2019     **Sampling Design for Michigan Educational Department**, Ann Arbor, MI
- Developed multi-stage selection plan and standard error calculation model for a probability-based proportionate sample of teenagers that used to monitor cigarette smoking and drug use with a budget of \$500,000 and population size of 830,138
- 2018-2019     **Optimization of Responsive and Adaptive Survey Design**, Ann Arbor, MI
- Developed optimized approaches for responsive design in the light of adaptive interventions in clinical trials to improve response rate and response data quality
- 2018-2019     **National Household Food Acquisition and Purchase Survey**, Ann Arbor, MI
- Evaluated the efficiency of finding SNAP households (hard-to-reach population) through zero-inflated negative binomial regression model with the covariates form census data
  - Conducted summary key statistics and latent class regression model to profile the respondents' characteristics
- 2017-2018     **Using Search Index to Predict the Incidence of HIV/AIDS in China**, Nanjing, China
- Cleaned and standardized the original raw data from the internet search index
  - Visualized HIV/AIDS incidences in thirty provinces in China in five-year period with STATA
- 2017     **Municipality Policy Framework: Building a Healthy Future**, Utrecht, Netherlands
- Designed qualitative research on teenager obesity and the social determinant of health behavior

## PUBLICATIONS

- He, G., Chen, Y., Chen, B., Wang, H., Shen, L., Liu, L., **Suolang, D.**, ... & Du, S. (2018) Using the Baidu Search, Index to Predict the Incidence of HIV/AIDS in China. *Scientific reports*, 8(1), 9038.
- Hu, M., He, W., **Suolang, D.**, Zhang, S., West, B., Kirlin, J. A., & Zhang, X. Response patterns in a multi-day diary survey: implications for adaptive survey design. *Survey Research Methods* (under review).
- West, B., **Suolang, D.**, Ameil, D., Wanger, J. Toward the Optimization of Responsive and Adaptive Survey Designs. *Survey Research Methods* (under review).

## CONFERNECE PRESENTATIONS

- 2020 “Presidential Election Trends Prediction with Web Data.” BigSurv20. Utrecht, Netherlands. (Submission accepted, will be virtually held due to the COVID-19)
- 2020 “Toward the Optimization of Responsive and Adaptive Survey Design.” Michigan Student Symposium for Interdisciplinary Statistical Sciences (MSSIIS). Ann Arbor, MI
- 2019 “Response patterns in a multi-day diary survey: implications for adaptive survey design.” American Association for Public Opinion Research (AAPOR). Toronto, ON, Canada

## HONORS & AWARDS

- 2020 Best Poster Presentation Award. Michigan Student Symposium for Interdisciplinary Statistical Sciences
- 2019 Travel Grant. University of Michigan Program in Survey Methodology
- 2018 Nanjing University Outstanding Graduate Award
- 2016 Research Grant. A Sociolinguistic Study on Tibetan-Chinese Code-mixing in Lhasa City

## SKILLS & INTERESTS

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|----------------------------|---|
| Health & Social Science    | Social Determinant of Health, Medical Decision-Making, Racial Disparities in Health Care and Care Delivery  |
| Statistical & Data Science | Multilevel Modeling, Structural Equation Model, Multivariate Analysis, Complex Sample Analysis, Computing and Data Display, Network Analysis, Statistical Inference |
| Survey Science             | New Modes of Data Collection, Adaptive/Responsive Survey Design, Total Survey Error, Survey Sampling, Questionnaire Design, Quantitative/Qualitative Research       |
| Programming                | R, STATA, SPSS, SAS, Python   |

## LANGUAGES

English, Tibetan, Mandarin/Chinese