

# Yi Ren

(US Citizen and Fully Authorized to Work in the USA)

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## PROFESSIONAL SUMMARY

Research Manager and statistician with an extensive background in research methods, program evaluation, statistical concepts and programming. Produced over 20 publications using data and research skills. Experience with using SPSS, Python, Excel, Qualtrics, SQL, and GIS.

## TECHNICAL AND QUANTITATIVE SKILLS

- Probability / Statistics
  - A/B Testing
  - SPSS
  - Python / Pandas / Matplotlib / Scikit-learn
  - Machine Learning models
  - Time Series
  - Social Network Analysis
  - Survey program (Qualtrics)
  - Excel Macros / Dashboard
  - SQL
  - GIS
  - Quantitative Research Methods
  - Data Cleaning
  - Data Manipulation
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## EXPERIENCE

### Research Manager

*Harris County Department of Education*

07/2018 - Present

*Houston, TX*

- Work as a statistician and team leader to produce 20+ annual evaluation reports using programming (SPSS/Python) and advanced functions in Excel, such as:
  - Advanced Excel Charting, Pivot Tables, Lookups, Logical & Array Functions, etc.
  - Programming of data merge, data cleaning, descriptive analysis, correlation, hypothesis tests, regressions, etc.
- Serve as the leading author or co-author to produce scholarly and non-scholarly research papers using statistical software programs (SPSS/Python) to clean and analyze data
- Led team to develop 10+ annual evaluation plans using various research tools and evaluation methods, such as Theory Change Model and Logic Model, etc.
- Develop 20+ annual surveys using advanced Qualtrics functions such as Display/Skip Logic, Piped Text, Authenticator, Embedded Data, Triggers, Quotas, etc.
- Present research/evaluation findings to non-technical stakeholders using advanced data visualization tools and methods, such as Excel Dashboard and GIS
- Work with department director to develop and implement strategic plans
- Provide consultation for Non-profit Organizations in research methods and statistics

**Research Coordinator***Harris County Department of Education*

04/2015 - 07/2018

*Houston, TX*

- Lead statistician in producing 12+ annual evaluation reports using programming (SPSS/Python) and advanced functions in Excel
- Responsible for developing 10+ annual surveys using advanced Qualtrics functions
- Presented research/evaluation findings to non-technical stakeholders using Excel Dashboard and Microsoft PowerPoint

**Research Assistant / Teaching Fellow***University of Houston*

08/2011 - 06/2015

*Houston, TX*

- Participated in diverse research projects using statistical software programs, such as SPSS, SAS, Stata, and Mplus
- Worked with research teams to develop data analysis strategies such as:
  - Hierarchical Linear Models
  - Regression Models (Multiple, Logistic)
  - Mixed-Model Growth Curve Analysis
  - Latent Class Analysis (Clustering approach)
  - Repeated MANOVA
- Taught Quantitative and Qualitative Research Methods courses to graduate students each semester

**Teaching Assistant***University of Houston*

08/2008 - 06/2011

*Houston, TX*

- Prepared various types of classroom materials to support instructors' teaching activities
- Taught SPSS for statistics lab, such as merging data, selecting data, descriptive analysis, assumption tests, hypothesis tests, results interpretation, etc.

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**EDUCATION****Degrees**

2016 Ph.D. Social Work  
*University of Houston (U.S.)*

2011 M.A. Sociology  
*University of Houston (U.S.)*

2004 M.A. Social Policy  
*University of Leeds (U.K.)*

2002 B.A. English  
*University of International Relations (China)*

**Additional Training***(Coursera & Data Camp Courses)*

Applied Plotting, Charting & Data  
Representation in Python

Applied Machine Learning in Python  
Intermediate Python for Data Science

Python Data Science Toolbox

Cleaning Data in Python

Pandas Foundations

Manipulating DataFrames with Pandas

Joining Data in SQL

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## FEATURED QUANTITATIVE PROJECTS AND PUBLICATONS

- *Social-Emotional Development in Early Childhood* with Harris County Department of Education Head Start Program
  - **Method: Repeated MANOVA**
  - Publication:  
  
Ren, Y., Jacobs, L., Garcia, A., Truxillo, J., Mavarez, C., McLeod, K. (2015). *Social-emotional development in early childhood: interactions between age, gender and language differences in a Head Start program* [Research Report]. Houston, TX: Harris County Department of Education.
- *Risky Sexual Behavior Transition among Latino Immigrants* with The Center for Research on U.S. Latino HIV/AIDS and Drug Abuse
  - **Method: Mixed-Model Growth Curve Analysis**
  - Publication: doi:10.1080/13691058.2016.1155751
- *Patterns of Psychotropic Medication Use during the Transition to Adulthood* with National Longitudinal Transition Survey II funded by the U.S. Department of Education
  - **Method: Latent Class Analysis**
  - Publication:  
  
Narendorf, S.C., Ren, Y. & Swank, P. R. (2014, March). *Psychotropic medication use in the transition to adulthood: A latent class analysis*. Poster presented at the Children's Mental Health Conference, Tampa, FL
- *Heroin Use Health Consequences among Aging Mexican Americans Primary Research* funded by the National Institutes of Health (NIH), National Institute of Drug Abuse (NIDA)
  - **Methods: Multiple Regression; Multiple Logistic Regression**
  - Publication:
    - doi:10.1080/1533256X.2017.1369884
    - doi:10.1080/15332640.2017.1316222
    - doi:10.3109/10826084.2013.776084
    - doi:10.1080/15332640.2013.788897