

# Yichen Jia

Email: YIJ22@pitt.edu

Immigration status: U.S. Lawful Permanent Resident

## Education

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**University of Pittsburgh**, Pittsburgh, PA Anticipated 2022

Ph.D. in Biostatistics

Dissertation advisor: Jong H. Jeong, Ph.D.

**University of Washington**, Seattle, WA Aug 2017

M.S. in Biostatistics

Thesis advisor: Timothy A. Thornton, Ph.D.

**University of Iowa**, Iowa City, IA May 2015

*Graduate with Distinction*

B.S. in Mathematics

B.A. in Biochemistry

## Work Experience

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**Sanofi Pasteur**, Swiftwater, PA; Cambridge, MA; Remote

*Biostatistician L2* Aug 2021 – present

- Focus on omics data related projects

*Biostatistician I* (contractor) Sep 2020 – Aug 2021

- Prepared SAP for clinical trials with transcriptomics data
- Analyzed transcriptomics data (microarray, RNA-seq)

*Biostatistics Summer Intern* Jun 2020 – Aug 2020

- Developed an R package for data analysis and power analysis using exact method for vaccine efficacy trial
- Classification of morphological phenotype using deep learning methods

**University of Pittsburgh Medical Center**, Department of Psychiatry, Pittsburgh, PA

*Graduate Student Researcher* Aug 2017- Aug 2021

PI: Mary Ganguli, M.D., MPH; Supervisor: (Joyce) Chung-Chou H. Chang, Ph.D.

- Provided statistical analysis and consultation for studying risk/protective factors of mild cognitive impairment/dementia and related entities

**University of Pittsburgh**, Pittsburgh, PA

*Teaching Assistant* Jan 2019 – Apr 2019

- BIOST 2086, Applied Mixed Model Analysis

**University of Washington**, Department of Biostatistics, Seattle, WA

*Graduate Research Assistant* Sep 2016 – Jun 2017

Supervisor: Timothy A. Thornton, Ph.D.

- Analyzed high-dimensional genomic dataset (human liver whole genome RNA-seq data) using machine learning tools

**University of Iowa**, Department of Obstetrics and Gynecology, Iowa City, IA

*Undergraduate Research Assistant*

Dec 2011-May 2015

P.I.: Kimberly K. Leslie, M.D.; Supervisor: Shujie Yang, Ph.D.

- Examined the mechanism of progesterone receptor (PR) down-regulation during endometrial cancer progression

## **Honors and Awards**

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ASA Student of the Year (Honorable mention), Pittsburgh Chapter	2021
ASA Lifetime Data Science (LiDS) Section Student Paper Award at JSM	2021
<i>Deep Learning for Quantile Regression under Right Censoring: DeepQuantreg</i>	
ICSA Applied Statistics Symposium Poster Award	2020
<i>Deep Learning for Quantile Regression under Right Censoring: DeepQuantreg</i>	
ENAR Distinguished Student Paper Award	2020
<i>Cause-specific Quantile Regression on Inactivity Time</i>	
University of Washington School of Public Health Awards of Excellence	2017
<i>Outstanding Master's Student</i>	
University of Iowa Student Employee of the Year Recognition	2014

## **Publications**

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### *Biostatistics – Methodology*

- **Jia, Y.** & Jeong, J. H. (2021). Deep Learning for Quantile Regression under Right Censoring: DeepQuantreg. *Computational Statistics and Data Analysis*, 107323. [link](#)
- **Jia, Y.** & Jeong, J. H. (2021). Cause-specific Quantile Regression on Inactivity Time. *Statistics in Medicine*, 40(7), 1811-1824.

### *Biostatistics – Collaboration*

- Lee, S., **Jia, Y.**, Snitz, B. E., Chang, C. C. H. & Ganguli, M. (2021+). Should Social Cognition Be Assessed in Older Adults? A Population-Based Study. *Submitted*.
- Runk A., **Jia, Y.**, Liu, A., Chang, C. C. H., Ganguli, M & Snitz, B. E. (2021+). Associations between visual acuity and cognitive decline in older adulthood: A 9-year longitudinal study. *Under revision*.
- Bhojak T., **Jia, Y.**, Jacobson, E., Snitz, B. E., Chang, C. C. H. & Ganguli, M. (2021). Driving Habits of older adults: A Population-Based Study. *Alzheimer Disease & Associated Disorders*, *in press*.
- Ganguli, M., Hughes, T. F., **Jia, Y.**, Lingler, J., Jacobson, E., & Chang, C. C. H. (2020). Aging and Functional Health Literacy: A Population-Based Study. *The American Journal of*

*Geriatric Psychiatry, in press. Epub 2020 Dec 11.*

- Lee, S., Jacobson, E., **Jia, Y.**, Snitz, B. E., Chang, C. C. H. & Ganguli, M. (2020). Reading the Mind in the Eyes: A Population-Based Study of Social Cognition in Older Adults. *The American Journal of Geriatric Psychiatry, in press. Epub 2020 Dec 01.*
- **Jia, Y.**, Chang, C. C. H., Hughes, T. F., Wang, S., & Ganguli, M. (2020). Predictors of Dementia in the Oldest Old: A Novel Machine Learning Approach. *Alzheimer Disease & Associated Disorders*, 34(4), 325-332.
- Cohen, A. D., **Jia, Y.**, Smagula, S. F., Chang, C. C. H., Snitz, B. E., Jacobson, E., & Ganguli, M. (2020). Cognitive functions predict trajectories of sleepiness over ten year: a population-based study. *The Journals of Gerontology: Series A*, glaa120.
- Smagula, S. F., **Jia, Y.**, Chang, C. C. H., Cohen, A., & Ganguli, M. (2019). Trajectories of daytime sleepiness and their associations with dementia incidence. *Journal of Sleep Research*, 29(6): e12952.
- Stoehr, G. P., Jacobson, E., **Jia, Y.**, Snitz, B. E., & Ganguli, M. (2019). Trends in the use of medication to treat or prevent dementia: a population-based study. *Alzheimer Disease & Associated Disorders*, 34(2):148-155.
- Shaaban, C. E., **Jia, Y.**, Chang, C. C. H., & Ganguli, M. (2019). Independent and joint effects of vascular and cardiometabolic risk factor pairs for risk of all-cause dementia: a prospective population-based study. *International psychogeriatrics*, 31(10), 1421-1432.
- Ganguli, M., **Jia, Y.**, Hughes, T. F., Snitz, B. E., Chang, C. C. H., Berman, S. B., ... & Kamboh, M. I. (2019). Mild Cognitive Impairment that Does Not Progress to Dementia: A Population-Based Study. *Journal of the American Geriatrics Society*, 67(2), 232-238.

#### *Biochemistry and Cell Biology*

- Kavlashvili, T., **Jia, Y.**, Dai, D., Meng, X., Thiel, K. W., Leslie, K. K., & Yang, S. (2016). Inverse relationship between progesterone receptor and Myc in endometrial cancer. *PLoS One*, 11(2), e0148912.
- Meng, X., Yang, S., Zhang, Y., Wang, X., Goodfellow, R. X., **Jia, Y.**, ... & Leslie, K. K. (2015). Genetic deficiency of Mtdh gene in mice causes male infertility via impaired spermatogenesis and alterations in the expression of small non-coding RNAs. *Journal of Biological Chemistry*, 290(19), 11853-11864.
- Yang, S., **Jia, Y.**, Liu, X., Winters, C., Wang, X., Zhang, Y., ... & Xu, Y. (2014). Systematic dissection of the mechanisms underlying progesterone receptor downregulation in endometrial cancer. *Oncotarget*, 5(20), 9783.
- Yang, S., Xiao, X., **Jia, Y.**, Liu, X., Zhang, Y., Wang, X., ... & K Leslie, K. (2014). Epigenetic modification restores functional PR expression in endometrial cancer cells. *Current pharmaceutical design*, 20(11), 1874-1880.
- Leslie KK, Thiel KW, Goodheart MJ, De Geest K, **Jia Y**, Yang S. Endometrial cancer. *Obstet Gynecol Clin North Am.* 2012 Jun;39(2):255-68. doi: 10.1016/j.ogc.2012.04.001.

## **Presentations**

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- (Talk) “Deep Learning for Quantile Regression under Right Censoring: DeepQuantreg”, *JSM (virtual)*, Aug 2021
- (Poster) “Deep Learning for Quantile Regression under Right Censoring: DeepQuantreg”, *ASA Pittsburgh Chapter Spring Banquet (virtual)*, Apr 2021.
- (Poster) “Deep Learning for Quantile Regression under Right Censoring: DeepQuantreg”, *Dean’s Day, Graduate School of Public Health, University of Pittsburgh (virtual)*, Apr 2021.
- (Poster) “Deep Learning for Quantile Regression under Right Censoring: DeepQuantreg”, *ENAR (virtual)*, Mar 2021.
- (Poster) “Deep Learning for Quantile Regression under Right Censoring: DeepQuantreg”, *Biostatistics Student Research Day, University of Pittsburgh (virtual)*, Mar 2021.
- (Poster) “Deep Learning for Quantile Regression: DeepQuantreg”, *ICSA (virtual)*, Dec 2020.
- (Talk) “Cause-specific Quantile Regression on Inactivity Time”, *ENAR (virtual)*, Mar 2020.
- (Talk) “Cause-specific Quantile Regression on Inactivity Time”, *Biostatistics Student Research Day, University of Pittsburgh, Pittsburgh, PA*, Feb 2020.

## **Statistical Packages**

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*DeepQuantreg*: A Python package (with GPU acceleration) for deep (Deep) censored quantile (Quant) regression (reg). Available on GitHub. [link](#)

*QRegIT*: An R package (with functions written in Rcpp) for quantile (Q) regression (Reg) on inactivity (I) time (T). Available on GitHub. [link](#)

*ExactVE*: An R package for exact method on vaccine efficacy trial with a non-zero lower bound. (internal use at Sanofi)

*TEDVisualizationTool*: An R package (utilizing *ggplot2*) for data visualization in vaccine study. (Joint work with Xiaoyu Lu, internal use at Sanofi)

## **Computational Skills**

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R, Python (PyTorch, TensorFlow, Keras, Scikit-learn, NumPy, Pandas, Matplotlib, etc.), UNIX shell scripting, Stata, SAS, LaTeX, cloud-based Jupyter notebook environment (e.g., Google Colab)

## **Professional Affiliations**

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Member of American Statistical Society (ASA)

Member of Eastern North American Region International Biometric Society (ENAR)

Member of International Chinese Statistical Association (ICSA)

## **Services**

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Business manager, Pitt ASA Student Chapter	Aug 2020 – Jul 2021
Student volunteer, LiDS conference	May 2019
Student volunteer, ASA Pittsburgh Chapter Poster session and Banquet	Apr 2019