Yuchen Zhang

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Education

University of Georgia — Athens, GA
PhD, Biostatistics — *Aug 2021 – Expected May 2026*

Emory University — Atlanta, GA
Master of Science in Public Health, Biostatistics; GPA:3.93/4.0 — *Aug 2019 – May 2021*
Thesis: *Estimating Optimal treatment regimes for Type II Diabetes management*

China Agricultural University — Beijing, China
Bachelor of Engineering, Food Quality and Safety; GPA:3.75/4.0 — *Sep 2015 – Jun 2019*
Thesis: *Analysis on Tastes of Different Snus with Electronic Tongue*
Bachelor of Economics, Finance; GPA:3.43/4.0 — *Sep 2016 – Jun 2019*
Thesis: *Personal Credit Risk Assessment of P2P Network Lending Based on Data Mining*

Publications

Zhang Y, Chen Y, He J. Analysis of Prevalence and Risk Factors of Hypertension in Community Residents of Nanshan District, Shenzhen. Hans Journal of Food and Nutrition Science. 2018;7(4):303-310.doi:10.12677/HJFNS.2018.74037

Moradi A, **Zhang Y**, Fan S et al. Contemporary Trends in the Management and Outcome of Patients with Traumatic Pelvic Fractures in Adults: A National Trauma Data Bank Study (In preparation)

Research Experience

Estimating Optimal Treatment Regimes for Type II Diabetes Management — Jun 2020 – May 2021
Thesis project for MSPH ***Advisor:*** *Limin Peng, Ph.D.* — *Atlanta, GA*

- Explored methods to estimate optimal treatment regimes for patients with Type II Diabetes based on Dynamic Treatment Regime (DTR).
- Posited a correctly specified model on outcome regression and propensity score treatment regression.
- Compared the difference of decision rules and expected outcome values based on the methods of Q-learning, Value Search Estimators (IPWE & AIPWE), Outcome Weighted Learning (OWL), Residual Weighted Learning (RWL) and Classification Estimator.

Iowa Women's Health Study (IWHS) — Jun 2020 – Present
Project assistant ***Advisor:*** *Roberd Bostick, Ph.D.* — *Atlanta, GA*

- Developed a method to calculate mineral scores with multiple minerals in aggregate based on the results from a food frequency questionnaire (FFQ) conducted in 1986.
- Investigated the association of mineral intakes with all-cause and cause-specific mortality.
- Used multi-variable Cox proportional hazards regression to explore the effect of mineral intakes to all-cause and cause-specific mortality.
- Conducted several sensitivity analyses to investigate whether mineral sources, mineral category, or any individual score component were particularly influential in the associations.

National Trauma Data Bank (NTDB) Study — Jun 2020 – May 2021
Project assistant ***Advisor:*** *Nima Kokabi, M.D.* — *Atlanta, GA*

- Compared the utilization and clinical outcomes of different therapies used for the management of traumatic pelvic fractures in adults.
- Based on the inclusion and exclusion criteria to do patients selection and management in R.
- Used a generalized linear mixed model to explore the associations of different treatments for traumatic pelvic fractures with LOS and mortality et al.
- Collaborated with PI and other authors of the paper, wrote the methods and results sections.

Personal Credit Risk Assessment of P2P Network Lending — Jan 2018 – May 2018
Thesis project for undergraduate Bachelor of Economics degree ***Advisor:*** *Jinzheng Ren, Ph.D.* — *Beijing, China*

- Explored a method for assessing the personal credit risk in P2P network lending.
- Based on machine learning algorithms: K nearest neighbors, decision tree, support vector machine (SVM), and random forest to do classification and prediction of personal credit risk.
- Compared the effect, accuracy and precision of classification, the random forest model performs best.
- Gave a presentation to faculty and staff in the College of Economics and Management.

Prevalence and Risk Factors of Hypertension in Shenzhen, China Jun 2018 – Nov 2018
Research assistant ***Advisor:*** *Jiguo He, Ph.D.* *Shenzhen, China*

- Determined the prevalence and risk factors of hypertension among community residents in Nanshan District, Shenzhen from 2016 to 2018.
- Developed a strategy for prevention and treatment of hypertension in the community through combining the specificity of population composition and lifestyle in the region.
- Multivariate logistic regression analysis showed that gender, age $\geq$ 50 years, overweight, obesity, and diabetes were risk factors for hypertension.
- As first author, wrote all sections of the paper. The paper has been published in *Hans Journal of Food and Nutrition Science*, which has been downloaded 528 times and viewed 1,650 times as of Oct 20th, 2020.

Analysis of Tastes of Different Snus with an Electronic Tongue Nov 2018 – May 2019
Thesis project for undergraduate Bachelor of Engineering degree ***Advisor:*** *Jun Wang, Ph.D.* *Beijing, China*

- Investigated the tastes of snus on the market by using an electronic tongue.
- Analyzed flavor data generated by the electronic tongue based on statistical analysis methods such as Principle Component Analysis, Discriminant Function Analysis and Cluster Analysis.
- Provided the foundation for extraction and statistical analysis method for future new products development.
- Gave a presentation to faculty and staff in the College of Food Science & Nutritional Engineering.

Professional Experience

Research Assistant in School of Medicine May 2020 – Present
Emory University *Atlanta, GA*

- Conducted statistical analysis based on data management of National Trauma Data Bank (NTDB).
- Provided mathematical analysis support to PIs on multiple projects.

Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID) Jul 2020
University of Washington *Online*

- Completed a course of introduction to spatial methods, such as assessment of clustering, cluster detection, spatial regression, small area estimation, and disease mapping.
- Learned the introduction to different digital data sources and technical challenges in collection, storage, and analysis. Also understood novel data streams time series for epidemic forecasting.
- Completed training in how to use phylogenetic and bioinformatic tools to reconstruct the spread of pathogens from genetic sequence data.

Internship in Department of Medical Affairs Aug 2018 – Oct 2018
Johnson & Johnson *Beijing, China*

- Assisted Medical Education Manager in planning, organization, executive management of academic activities.
- Took charge of application process for medical affairs activities within the registration system.

Mentoring and Teaching Experience

Teaching Assistant Aug 2020 – Dec 2020
Graduate level SAS Programming *Atlanta, GA*

- Assisted instructors with course instruction on zoom and graded SAS programs weekly.
- Held weekly one-hour office sessions and answered technical questions for students by email.

Tutoring Aug 2020 – Dec 2020
Statistical Methods for Excutive MPH (EMPH) *Online*

- Provided one-hour tutoring sessions weekly and answered questions from students on Zoom.
- Helped students understand their assignments and reviewed theories and applications of biostatistical methods.

Technical Skills

Languages: SAS, R, SPSS, Java, Python, SQL, LaTeX

Coursework

Probability Theory (A); Applied Linear Models (A); Statistical Inference I (A); Survival Analysis Methods (In progress) Modern Regression Analysis (In progress); Advanced Linear Models (In progress)

Honors & Awards

- 2020 Summer Institute in Statistics and Modeling in Infectious Diseases (SISMID) Scholarship (2020)
- Excellent Student Awards in China Agricultural University (2015, 2016)
- First-Place Academic Excellence Scholarship in China Agricultural University (2015, 2016)
- Third-Place Social Work Scholarship in China Agricultural University (2016)
- Minister, Department of Career Practice in SGA in China Agricultural University (2016)