

SHIYAO, WANG

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EDUCATION

CS Department & Harris School of Public Policy, University of Chicago

Master of Science in Computer Science & Public Policy

GPA: 3.97/4.00

Chicago, IL

Expected *June 2026*

School of Economics & Schoole of Mathematics, Renmin University of China

B.S. in Mathematics & B.A. in Economics | First Class (Honors) & Outstanding Graduates

GPA: 3.55/4.00

Beijing, China

June 2024

University of California, Davis – Global Study Program

GPA: 4.00/4.00

Davis, CA

September 2022 - December 2022

RESEARCH EXPERIENCE

Research on Computational Analysis of Ethnic Stereotypes Using Word Embeddings

Research Assistant | Co-Advisors: Prof. Xuechunzi Bai & Prof. Joshua Jackson

The University of Chicago Booth School of Business & Psychology Department

November 2024 - Summer 2025

- Leveraged **natural language processing (NLP) techniques**, including **word embeddings** and the **word2vec model**, to analyze 100 years of large-scale textual data from the COHA/Google Book historical word embeddings.
- **Engineered prompts** to probe LLMs (ChatGPT4o) for implicit biases and extract prediction probabilities and key conceptual relationships.
- **Utilized Python and machine learning libraries** (e.g., NetworkX, SpaCy) for **topic modeling and fine-tuning LLMs** to analyze historical changes in ethnic stereotypes, generating data-driven insights.
- **Merged and cleaned** NLP-derived data with the IPUMS database to conduct **regression analyses**, examining the relationships between historical semantic trends and socioeconomic condition.

NLP-based Empirical Research on Gender Equity in Chinese Civil Service Job Market

Research Assistant | Advisor: Prof. Junjian Yi

The National School of Development, Peking University

December 2023 - Present

- Designed and implemented a **large-scale data pipeline** to construct a dataset of 300,000+ records of major Chinese government departments with civil servant recruitment data spanning 15 years.
- Applied **Natural Language Processing (NLP)** techniques and **Machine Learning** tools to analyze textual content of job postings, with a focus on gendered language and implicit bias in recruitment advertisements.
- Utilised tools such as **Python's Tensorflow, Pytorch and Scikit-learn** for keyword extraction, topic modeling, and sentiment analysis to identify patterns of gender representation across sectors and over time.

National Science Fund for Talent Training in Basic Science, RUC

Lead Student | Advisor: Prof. Yun Wang

Beijing, China

April 2023 - July 2024

- Utilised Python to conduct data cleaning and analysis with datasets from Survey and Research Center for China Household Finance (CHFS) and China Earthquake Administration (CEA). Implemented a Cohort DID model to examine **the causal effect** of childhood disaster experiences on adult participation in commercial health insurance.
- Completed an empirical paper *Early life Diaster Exposure and Long-Term Health Risk Effect: A Life-span Empirical Evidence from China* and submitted to *China Economic Review*, currently under reviewed.

PRESENTATIONS

Society for Personality and Social Psychology (SPSP), Chicago, US

February 2026

- Preconferences: Historical psychology (Presented by Dr. Xuechunzi Bai as Invited Speaker), Computational psychology
- Main Conference

The University of Chicago, Booth School of Business

March 2025

- Presented *Distributional Hypothesis of Immigrant Representations* at Perception and Judgement Lab (Lead PI: Dr. Alex Todorov)

TEACHING EXPERIENCE

Teaching Assistant for CAPP 30271: Mathematics for Computer Science and Data Analysis, University of Chicago

Teaching Assistant | Advisor: Prof. Timothy Ng

Jan 2025 - Apr 2025

- Delivered discussion lectures on core linear algebra concepts and their applications in data analysis..
- Provided one-on-one office hours to help students debugging (50+ students).

Teaching Assistant for CAPP 30121: Python Applications, University of Chicago

Teaching Assistant | Advisor: Prof. Suhail Rehman

September 2025 - December 2025

- Assisted Prof. Suhail in grading homework and answering course-related questions.
- Provided one-on-one office hours to help students debugging (50+ students).

PROFESSIONAL EXPERIENCE

A Better Chicago | Project Manager for Lost Boyz Inc.

Chicago, IL

Sept 2024 - November 2024

A Better Community Consulting Group | Project Manager

Beijing, China

March 2023 - June 2024

Ogilvy China | Consulting Intern

Beijing, China

January 2022 - April 2023

IQVIA China | Health Economics and Outcome Research Intern

Beijing, China

September 2022 - January 2023

SELECTED PROJECTS

- **Early life Disaster Exposure and Long-Term Health Risk Effect: A Life-span Empirical Evidence from China** (with Xinzhen Zhang), Under Review
- **Distributional Hypothesis of Immigrant Representations** (with Joshua Jackson & Xuechunzi Bai), in Prep for submission to *Psychological Science*
- **Female Leadership in Chinese Civil Servants Recruitment** (with Hanyu Zhu & Junjian Yi), Manuscript in Prep, Targeted Journal: *Management Science*

HONORS

- Hong Kong PhD Fellowship Scheme, 2026
- University of Chicago, Nominee for the Siebel Scholars, 2025 (CS Department, 5 nominees total)
- RUC Outstanding Graduates, 2024
- RUC Outstanding Academic Performance Scholarship, the Level II Prize in 2022-2023 (500 \$)
- RUC National Science Fund for Talent Training in Basic Science, 2022 (500 \$)
- RUC Principal's Scholarship, 2021-2022 (6,000 \$)

SKILLS

Language/Exam: GRE: 331 in total with Verbal 161 Quant 170 IELTS:7.5

Programming Tools: Python, Stata, R, SQL, Latex, C/C++, Scikit-learn, Tensorflow, Pytorch, Topic-Modelling

Interest: Guitar, Swimming, Soccer

REFERENCES

Dr. Xuechunzi Bai

Neubauer Family Assistant Professor in Psychology & the University of Chicago's Booth Decision Center
baix@uchicago.edu

Dr. Joshua Conrad Jackson

Neubauer Family Assistant Professor in Behavioral Science, the University of Chicago's Booth School of Business
joshua.jackson@chicagobooth.edu

Dr. Junjian Yi

Peking University Boya Distinguished Professor, National School of Development at Peking University
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Dr. Dan Black

Professor, Harris School of Public Policy, the University of Chicago
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