

# WILLIAM (WEI) ZHU

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## Education

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### The University of Chicago (Chicago, IL)

MA Computational Social Science (STEM), Quadrangle Scholar, GPA: 3.8/4.0

June 2022 (Expected)

Relevant Courses: Python Programming, Perspectives on Computational Analysis, Competitive Strategy (Booth)

Current Courses: Introduction to Machine Learning, Causal Inference, Computational Content Analysis

### Haverford College (Haverford, PA)

BA Sociology, Minor in Statistics, GPA: 3.73/4.0, GRE: V:165 Q:167 W:5.0

May 2019

Relevant Courses: Financial and Managerial Accounting, Applied Multivariate Statistical Analysis, Probability, Econometrics

## Work Experience

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### Westat (Rockville, MD)

Research Assistant (Full-time)

July 2019 – June 2020

- Received “Exceptional” (highest rating) at yearly performance review in all 8 education evaluation projects by performing tasks including data analyses (in R and Excel), literature review, interviews, and report writings.

[Improving the Use of Research Evidence](#) [funded by William T. Grant Foundation]

- Saved project budget by \$30K by compiling datasets using R tidyverse 2 months ahead of schedule from the National Center for Education Evaluation (NCEE) restricted-access database.
- Performed data imputation using regression tree and hot-deck imputation. Built models using LASSO to predict the effectiveness of school intervention programs on other schools (Project on hold due to Covid).

[Meta-analysis of Dropout Prevention Program](#)

- Explored meta-analysis techniques by analyzing evaluation data on dropout prevention programs in four states.
- Published an article as the third author titled “Using state data sets and meta-analysis of low-powered studies to evaluate a school-based dropout prevention program for students with disabilities” at *Studies in Educational Evaluation*.

[Racial Equity Action Leadership \(REAL\) Program Evaluation](#)

- Performed participant observations at a series of monthly workshops where 30+ regional corporate leaders learn and discuss methods to improve racial equity in organizations.
- Found that the workshop program is effective at guiding participants to craft racial equity plan for their companies by organizing 2 focus groups and administering 10 surveys. Co-authored in the final evaluation report.

## Projects

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[Predict Employee Attrition](#) (Kaggle Project)

December 2020

- Achieved a prediction score of 0.876 using XGBoost algorithm (Python scikit-learn) to predict employee attrition from IBM HR Analytics dataset (1470 rows, 79 variables).
- Compared prediction performance among logistic regression, Naïve Bayes, KNN, Random Forest, and Radial SVM.

[Speech Recognition System](#) (UChicago course project)

November 2020

- Developed a speech recognition program in Python using Markov models. Compared performance between the data structures of hash tables and dictionaries.

Innovation and Democratization (Haverford College Senior Thesis | Advisor: Mark Gould)

July 2018 – May 2019

- Received 4.0 (highest grade) by conducting a year-long text-based research project on the impact of the semiconductor industry to Taiwan’s democratization in the 1980s. Authored a 21,000+ word research paper.

[Racial Disparities in Academic Achievements](#) (Haverford College course project)

January 2017 – May 2017

- Authored a research paper titled “The Skew of Pathways: The Structural Explanation for the Asian American Academic Achievements”; Presented at the 2019 American Sociological Association (ASA) Annual Meeting in the New York City.

## Skills & Interests

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**Skills:** R (tidyverse), Python (NumPy, pandas, seaborn, scikit-learn), SQL, LaTeX, HTML/CSS, Microsoft Office

**Interests:** Reading books about organizational behavior, strategy, and management (finished 60 books in 2020)