

# 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: Computational Modelling, Discrete Math, 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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### Polsky Center for Entrepreneurship and Innovation (Chicago, IL)

Small Business Growth Student Consultant (Part-time)

Jan 2021 –

- Developing growth strategies for a safety vest retailer by conducting research to identify target customer segments.
- Present findings at weekly team and client meetings. Participating in training sessions by Prof. Craig Terrill.

### 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](#)

- Demonstrate that dropout prevention programs in four states are ineffective using meta-analysis techniques.
- 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 monthly workshop program 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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[Predicting 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).
- Demonstrate that Random Forest performs better than other classification methods including logistic regression, Naïve Bayes, KNN, Random Forest, and Radial SVM for this particular prediction task.

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

November 2020

- Developed a speech recognition program in Python using Markov models. Demonstrate that dictionaries perform significantly faster than hash tables in this particular program.

The Effect of Parenting Strategies on Video Games (Haverford College course project)

May 2019

- Demonstrate that “compassionate parenting” is strongly associated with low video game playing time of students, while “authoritarian parenting” is not, by building linear regression models from American Youth survey data using R.

## Skills & Interests

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

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