WILLIAM (WEI) ZHU

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Education

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, Competitive Strategy (Booth), Machine Learning, Content Analysis

Haverford College (Haverford, PA)
BA Sociology, Minor in Statistics, GPA: 3.73/4.0 *May 2019*

Work Experience

Polsky Center for Entrepreneurship and Innovation (Chicago, IL)
Small Business Growth Student Consultant (part-time) *Jan 2021 – present*

- Develop go-to-market strategies for a safety vest retailer by conducting interviews, surveys, and market research
- Present research findings and recommendations at weekly team and client meetings

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

Project Highlights at Westat:

Improving the Use of Research Evidence [project link]

- 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

Meta-analysis of Dropout Prevention Program [publication link]

- Demonstrated 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" in *Studies in Educational Evaluation*

Racial Equity Action Leadership (REAL) Program Evaluation [program link]

- Performed participant observations at a monthly workshop program where 30+ regional corporate leaders learn and discuss methods to improve racial equity in organizations
- Discovered 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 the final evaluation report that contributed to the REAL program's continued funding

Projects

Predicting Employee Attrition [Kaggle Project; GitHub link] *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)
- Demonstrated 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; GitHub link] *November 2020*

- Developed a speech recognition program in Python using Markov models
- Demonstrated 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*

- Demonstrated 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

R (tidyverse, glmnet), Python (NumPy, pandas, scikit-learn, NetworkX), SQL, Latex, HTML/CSS, Microsoft Office