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), Computational Modelling, 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 motorcycle safety vest vendor by conducting interviews 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:

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 (third author) titled "Using state datasets and meta-analysis of low-powered studies to evaluate a school-based dropout prevention program for students with disabilities" in *Studies in Educational Evaluation*

Improving the Use of Research Evidence [project link]

- Saved project budget by $30K by compiling datasets using R 2 months ahead of schedule
- Built LASSO models to predict the effectiveness of school intervention programs on other schools

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

- Discovered that the REAL program is effective at guiding 30+ participants to craft racial equity plan for their companies by performing participant observations, organizing 2 focus groups, and administering 10 surveys
- Co-authored the final evaluation report that contributed to the REAL program's continued funding

Projects

Impact of CEO Turnover on Company Culture [MA Thesis project; GitHub link]   *Jan 2021- present*

- Analyze how CEO turnovers affect company cultural change using Glassdoor company review data
- Employing Latent Dirichlet Allocation (LDA) topic modelling to extract cultural topics from text reviews

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 kids' low video game playing time, while "authoritarian parenting" is not, by building linear regression models from American Youth survey data using R

Skills

- R (tidyverse, caret), Python (NumPy, pandas, scikit-learn), SQL, Latex, HTML/CSS
- Linear Regression, Logit, LDA, QDA, SVM, KNN, decision tree, random forest, boosting, PCA, clustering
- Hypothesis Testing, A/B Testing, Cross-Validation, Bootstrapping, Model selection and regularization