

# WILLIAM ZHU

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## Education

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

MA Computational Social Science (STEM), Quadrangle Scholar, GPA: 3.78/4.0

June 2022 (Expected)

Relevant Courses: Python Programming, Algorithms, Competitive Strategy (Booth), Computational Content Analysis, Machine Learning, Deep Learning

### Haverford College (Haverford, PA)

BA Sociology, Minor in Statistics, GPA: 3.73/4.0

May 2019

## Work Experience

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### Polsky Center for Entrepreneurship and Innovation (Chicago, IL)

Small Business Growth Student Consultant (part-time)

Jan 2021 – March 2021

- Recommended a motorcycle safety vest vendor to launch an online e-commerce website by conducting customer segmentation, competitor, and 4P analyses
- Presented at 3 client meetings and led discussions in 10 weekly team meetings

### Westat (Rockville, MD)

Research Assistant (full-time)

July 2019 – June 2020

- Received the highest performance rating for all 8 evaluation projects by performing data analysis in R and report writings for clients including U.S. Department of Education, Verizon, and National Science Foundation
- Co-authored a [journal article](#) 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*
- Co-authored an [evaluation report](#) for Racial Equity Action Leadership (REAL) Program to show that the program is effective at guiding 30+ participants to craft racial equity plan for their companies via 8 participant observation sessions, 10 surveys, and 2 focus groups

## Projects

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Exploring Variations in Divvy Bike Station Usage Volume [[5-min presentation](#), [blog post](#)]

March 2021 – June 2021

- Discovered strong associations between the usage volumes of public bike share stations and factors including network effect, crime rates, socio-economic status, and demography by compiling a station-level dataset from 7 databases including 300K Divvy bike trip records, 210K Chicago crime records, 11K bus stops records, U.S. Census, and Zillow home value index

Uncovering Linkages between Cultural Values and Company Directions [[5-min presentation](#)]

March 2021 – June 2021

- Demonstrated that firms with an agile culture have higher likelihood of initiating share buyback, attracting private placement, and receiving M&A offers within one year by measuring keyword frequencies of 4M Glassdoor employee reviews from 6K firms in the U.S.
- Matched 20K company names between S&P Capital IQ and Glassdoor employee review databases by constructing a customized string similarity measure based on the [fuzzywuzzy](#) python package

Impact of CEO Turnover on Company Culture [[5-min presentation](#), [GitHub link](#)]

Jan 2021- March 2021

- Demonstrated that CEO turnovers of three tech companies had limited impact on company culture by analyzing 60K Glassdoor employee reviews from 6 companies (FAANG and Microsoft)
- Employed textual analysis techniques including divergence metrics (Kolmogorov-Smirnov, Wasserstein), word embeddings (word2vec), and classification methods (Logit, SVM, KNN, Random Forest, Boosting)

## Skills

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- Tools: Python, R, SQL, Git/Github, Latex, HTML/CSS
- Machine Learning: Linear and Logistic Regressions, LDA, QDA, KNN, tree-based methods, PCA, clustering
- Hypothesis Testing, A/B Testing, Cross-Validation, Bootstrapping, Model selection and regularization