

# BRAD WEINER, PHD

I am an energetic, lifelong-learner who is passionate about leveraging data to understand and solve complex business problems. Most recently I led the data science team at Capture Higher Ed, a Louisville-based data and software company that helps colleges and universities optimize their recruitment and advancement resources.



## SELECTED POSITIONS

2020  
|  
2016

### Director → Senior Director of Data Science

Capture Higher Ed

📍 Louisville, KY

- Lead a centralized data science team charged with R&D, data products, analytics, data engineering, data quality, and thought leadership. This group:
- Generates ~10% of company revenue with a suite of data products including a student survey platform, a ML ensemble for enrollment outcomes that is 95% accurate, an analytic campaign reporting platform, and descriptive utilities for our marketing automation platform
- Built and maintains a partitioned data warehouse using S3 and Athena. This multi-year project pushed the company toward an analytic-friendly data storage tool and dramatically advanced our descriptive and predictive capabilities
- Improves and optimizes. Examples include a ML-model which assigns webpage tags (~.10 FTE), a fuzzy de-duplication tool (~.10FTE), a Slack Bot to quickly retrieve internal information (~0 FTE, but way more awesome), a script to populate project management tickets estimated to save ~100 hours/year
- Provides thought leadership internally and externally. Examples include experimental design seminars to aid continuous improvement, sessions and training on algorithmic bias, webinars and conference presentations on data science, public code repositories for SAT/ACT concordance transformations, national conference Twitter analytics, and a podcast for higher education professionals that was downloaded >19K times prior to relaunch
- Fails and learns. In my view it is important to recognize that not every project works out. Our team has created prototypes missing a market fit, models that have failed to converge, tools that have been too complex to explain or scale, and ideas that haven't had sufficient data to test. In these situations we've learned, iterated, and worked to rapidly incorporate this knowledge into future tests

2016  
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2015

### Data Scientist

Capture Higher Ed

📍 Louisville, KY

- Produced machine learning models, analytic tools, feature upgrades, analyses, and various prototypes
- Developed several widely adopted indices for aggregated behavioral web visit data at the individual level
- Traveled to partner institutions to present results and prescriptive strategies to senior enrollment leadership

2016

### Adjunct Instructor, Quantitative Reasoning and Decision-Making

The University of Minnesota - Twin Cities

📍 Minneapolis, MN

- Designed and taught OLPD 8087: Quantitative Reasoning and Decision-Making for a cohort of 20 PhD students in the College of Education and Human Development
- Taught students the basics of exploratory data analysis, data storytelling, and reproducible research

2015  
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2012

### Analyst, Office of the Vice Provost for Undergraduate Education

The University of Minnesota - Twin Cities

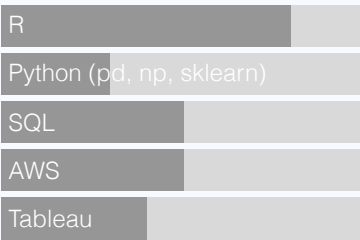
📍 Minneapolis, MN

- Researched institutional policies and proposed interventions impacting more than 30,000 undergraduates and annual institutional aid distributions of >\$80 million
- Employed statistical models to explore and understand interactions between enrollment, retention, tuition revenue, student aid, and student borrowing
- Produced ad-hoc analyses, visualizations, and presentations for campus partners including The Minnesota State Office of Higher Education, University Relations, Legislative Affairs, University Finance, the Office of the Provost, the Office of the President, and the Board of Regents

## CONTACT

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- 📍 Minneapolis, MN

## LANGUAGE SKILLS



## DOMAIN KNOWLEDGE

- Enrollment Management
- Financial Aid
- Retention
- Advancement
- Data Science Leadership and Training
- Product Management

2012  
|  
2009

● **Graduate Research Assistant, Office of Undergraduate Admissions**

The University of Minnesota - Twin Cities

📍 Minneapolis, MN

- Researched and modeled patterns in prospective student choice behavior for >25,000 applicants and >5,000 FTFT students annually
- Tripled explanatory power and increased predictive model accuracy by 25%, enabling more efficient resource allocation

2009  
|  
2006

● **Assistant Director, Undergraduate Admissions**

Vanderbilt University

📍 Nashville, TN

- Responsible for recruitment, communications, and application-reading for domestic and international territories
- Hosted weekly "Data Summits" to build data-driven culture among new and veteran staff
- Processed, evaluated, and disseminated data to enhance strategic decisions regarding travel, selection criteria, scholarship evaluation, applicant pool diversity, secondary school quality, admissions yield, and website traffic

2004  
|  
2002

● **Admissions Counselor, Office of Admissions and Scholarships**

The University of Kansas

📍 Lawrence, KS



## SELECTED PUBLICATIONS & PRESENTATIONS

2019

● **The Modal Institution of Higher Education**

bradweiner.info

- Code tutorial in R demonstrating how to find the "modal" college or university. Modeled after "Modal American" episode of Planet Money.

2019  
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2016

● **The Weightlist Podcast**

Capture Higher Ed

- Co-hosted Weightlist Podcast which served as a venue for discussing data science and higher education. More than 19K downloads over three-year run
- Rebranded and launched as "The Buzz". Earlier episodes available at link

2017

● **Patterns of Gendered Performance Differences in Large Introductory Courses at Five Research Universities**

AERA Open

- Authored with Rebecca L. Matz, Benjamin P. Koester, Stefano Fiorini, Galina Grom, Linda Shepard, Charles G. Stangor, & Timothy A. McKay
- Ran parallel analysis with data scientists and researchers from 5 large research universities
- Data set included >1 million course enrollments across 13 academic disciplines



## EDUCATION

2014  
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2009

● **Ph.D., Educational Policy and Administration**

The University of Minnesota - Twin Cities

📍 Minneapolis, MN

- Dissertation Title: Internationalizing the Advancement Agenda: A Multi-Case Study of Advancement Practices at Universities with Very High Research Activity
- Used my time in PhD program to learn statistical methods, data science, and the R statistical language

2006  
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2004

● **M.Ed., Higher Education Administration**

Vanderbilt University

📍 Nashville, TN

- Graduate Assistant for Office of New Student Programs and Student Activities

2002  
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1998

● **B.A., English**

The University of Kansas

📍 Lawrence, KS