Brian Kissell

Data Scientist | Quantitative Researcher | Experimental Psychologist

Curriculum Vitae

Personal Information
Phone: 801-413-4866
E-mail: Brian.l.kissell@gmail.com
Web Page: BrianKissell.com
LinkedIn: Brianlkissell
Current Location: Stockbridge, MI

Applied researcher highly skilled in the design, implementation, and analysis of large, complex, and dynamic datasets. Expertise in research design, interpretable statistical modeling, causal inference, and textual analysis.

EDUCATION

Doctor of Philosophy in Applied Experimental Psychology
Central Michigan University, Mount Pleasant, MI (2017 – 2020)

Master of Science in Applied Experimental Psychology
Central Michigan University, Mount Pleasant, MI (2015 – 2017)

Bachelor of Science in Psychology
University of Utah, Salt Lake City, UT (2011 – 2013)

Associate of Science in Psychology
Salt Lake Community College, Salt Lake City, UT (2008 – 2011)

RESEARCH INDUSTRY EXPERIENCE

Quantitative Researcher - Experimental Social Psychology Lab
Central Michigan University (2015 – 2020)

- Managed research teams on more than twenty experiments and surveys. Led teams through hypothesis generation, data collection, statistical modeling, and the reporting of results.
- Used R for each study to conduct power analyses, clean and prepare the datasets, run descriptive statistics and hypothesis tests (i.e., analysis of variance, linear and logistic regression, t-tests, chi-square, equivalence tests, psychometric tests, etc.), create data visualizations, and perform exploratory data analysis to further develop theories and address relevant questions.
- Conducted meta-analyses, evaluated causal diagrams with general linear models, ran path analyses, ran structural equation models, and constructed and validated numerous measures.

Research Assistant – Dynamical Systems Lab
University of Utah (2012 – 2014)

- Independently analyzed and explored numerous simulated datasets related to dynamical systems theory.

Research Assistant – COPE Lab
University of Utah (2011 – 2012)

- Transcribed interviews with children and worked with textual data.

TECHNICAL SKILLS

Programming and Coding

- R, Python, SQL, Excel, SPSS, Linux, Git, HTML/CSS, JavaScript

Statistics, Modeling, and Machine Learning

- Linear Regression, Logistic Regression, General Linear Model, Correlation, Analysis of Variance, Time Series Analysis, Meta-Analysis, Psychometrics, Factor Analysis, Structural Equation Modeling, Bayesian Analysis, Random Forest Models, Principle Component Analysis, K-Means Clustering, Hierarchical Clustering, K Nearest Neighbors, Naïve Bayes, Probability, Statistical Inference, Causal inference, Causal Diagrams, Exploratory Data Analysis

Textual Analysis

- Text Mining, Sentiment Analysis, Regular Expressions, Topic Modeling, Named Entity Recognition, Classification, Recommendation systems, spoken language processing

Research Methods

- Hypothesis Generation, Experimental Design, Survey Design, A/B Testing, Sampling Methods, Scale Construction, Measurement Validation, Data Collection, Web Scraping, Statistical Simulation, Power Analysis, Data Manipulation, Data Cleaning

INDUSTRY EXPERIENCE

Data Scientist – Freelance
Mount Pleasant, MI (2015 – 2020)
- Conducted numerous data science projects by utilizing the CRISP-DM method (i.e., business understanding, data understanding, data preparation, modeling, evaluation, and deployment).
- Utilized Python, R, and SQL to scrape textual data and to create large datasets.
- Conducted data cleaning, textual analysis, data visualization, machine learning, classification modeling, natural language processing, and more.

Technician – ARUP Laboratories
Salt Lake City, UT (2011 – 2015)
- Facilitated testing in a genetics laboratory, and gained experience working with data in a medical setting

UNPUBLISHED MANUSCRIPTS

A preregistered paradigmatic test of the ego depletion effect.
Collaboration in 2020 with Bryan Gibson, Kathleen D. Vohs, Brandon J. Schmeichel, and others.

A meta-analytic evaluation of biased assimilation and polarization.
Collaboration in 2019 with Bryan Gibson, Matt Prewett, and Matt M. Motyl.

The influence of overvaluation on narcissism.
Collaboration with Bryan Gibson, and Brad Bushman.

Profundity, truth, and BS: An Investigation of the BRS.
Collaboration in 2018 with Bryan Gibson, Kyle C. Scherr, and Christopher C. Davoli.

The impact of physical position and prayer on cognitive style.
Collaboration in 2017 with Bryan Gibson, Kyle C. Scherr, and Christopher C. Davoli.

Has psychology always been so ideologically biased? A historical approach.
Historical paper written in 2017.

UNPUBLISHED STUDIES AND DATA

Construction of the perceived threat to identity scale.
Collaboration in 2020 with Bryan Gibson, Kyle C. Scherr, Christopher C. Davoli, Sarah E. Domoff, Emily K. Bloesch.

Experimental evaluation of the perceived threat to identity scale.
Collaboration in 2020 with Bryan Gibson, Kyle C. Scherr, Christopher C. Davoli, Sarah E. Domoff, Emily K. Bloesch.

Reporting
- RShiny, RMarkdown, Dash, Plotly, ggplot2, Tableau, Powerpoint

DATACAMP CERTIFICATIONS

Data Scientist with R – Career Track
- Introduction to R
- Intermediate R
- Introduction to the Tidyverse
- Introduction to Importing Data in R
- Intermediate Importing Data in R
- Cleaning Data in R
- Importing & Cleaning Data in R: Case Studies
- Introduction to Writing Functions in R
- Data Manipulation with dplyr
- Joining Data with dplyr
- Introduction to SQL
- Data Visualization with ggplot (Part 1)
- Data Visualization with ggplot2 (Part 2)
- Working with Dates and Times in R
- Introduction to Data in R
- Exploratory Data Analysis in R
- Case Study: Exploratory Data Analysis in R
- Correlation and Regression in R
- Cluster Analysis in R
- Supervised Learning in R: Classification
- Unsupervised Learning in R
- Joining Data in SQL

Probability and Distributions with R – Skills Track
- Foundations of Probability in R
- Multivariate Probability Distributions in R
- Probability Puzzles in R
- Mixture Models in R

Classification model of political affiliation with Twitter data from all members of the 116th U.S. Congress.
Independent project in 2020.

Audio transcription, textual analysis, and statistical modeling of a religious podcast.
Independent project in 2020

Religious decline on right-wing authoritarianism, ideology, and Trump tweets.
Collaboration in 2020 with Bryan Gibson.

The induction of religious decline through video clips on authoritarianism, conservative ideology, and authoritarian behavior.
Collaboration in 2020 with Bryan Gibson.

The influence of cellphones on serial associative cognition.
Collaboration in 2020 with Bryan Gibson, Christopher C. Davoli, and Emily K. Bloesch.

Textual analysis of sixty years of speeches from leaders of a religious organization.
Independent project in 2019

A meta-analytic evaluation of biased assimilation and polarization.
Collaboration in 2019 with Bryan Gibson, Matt Prewett, and Matt M. Motyl.

The influence of cellphones on serial associative cognition. Pilot.
Collaboration in 2019 with Bryan Gibson, Christopher C. Davoli, and Emily K. Bloesch.

The influence of mindfulness meditation on serial associative cognition.
Collaboration with Bryan Gibson, Christopher C. Davoli, and Emily K. Bloesch.

Teaching about the replication crisis: Pilot.
Collaboration in 2019 with Bryan Gibson, and Kyle C. Scherr.

Religious decline and contemplation on authoritarianism, religious beliefs, evaluative bias, and political beliefs.
Collaboration in 2018 with Bryan Gibson.

Religious decline and source of information on authoritarianism, religious belief, evaluative bias, and political beliefs.
Collaboration in 2018 with Bryan Gibson.

Religious threat on political and religious beliefs.
Collaboration in 2018 with Bryan Gibson.

Religious threat on evaluative bias and religiosity.
Collaboration in 2018 with Bryan Gibson.

Statistician with R – Career Track
- Introduction to Data in R
- Exploratory Data Analysis in R
- Modeling with Data in the Tidyverse
- Correlation and Regression in R
- Multiple and Logistic Regression in R
- Foundations of Inference
- Foundations of Probability in R
- Dealing with Missing Data in R
- Experimental Design in R
- A/B Testing in R
- Fundamentals of Bayesian Data Analysis in R
- Linear Algebra for Data Science in R
- Inference for Categorical Data in R
- Bayesian modeling with RJAGS

Statistical Inference with R – Skills Track
- Foundations of Inference
- Inference for Categorical Data in R
- Inference for Numerical Data
- Inference for Linear Regression in R

Statistics Fundamentals with R – Skills Track
- Introduction to Data in R
- Exploratory Data Analysis in R
- Correlation and Regression in R
- Multiple and Logistic Regression in R
- Experimental Design in R

Importing and Cleaning Data with R – Skills Track
- Introduction to Importing Data in R
- Intermediate Importing Data in R
- Cleaning Data in R
- Importing and Cleaning Data in R: Case Studies

The influence of religious threat on a Christianity/Islam implicit association task.
Collaboration in 2018 with Bryan Gibson.

The influence of religious threat on a Christianity/Islam implicit association task and the religious and political beliefs of participants.
Collaboration in 2018 with Bryan Gibson.

A preregistered paradigmatic test of the ego depletion effect.
Collaboration in 2017 with Bryan Gibson, Kathleen D. Vohs, Brandon J. Schmeichel, and others.

The effect of experimenter presence on ego-depletion.
Collaboration in 2017 with Bryan Gibson.

The impact of physical position and prayer on cognitive style.
Collaboration in 2017 with Bryan Gibson, Kyle C. Scherr, and Christopher C. Davoli.

Profundity, truth, and BS: An Investigation of the BRS.
Collaboration in 2017 with Bryan Gibson, Kyle C. Scherr, and Christopher C. Davoli.

Religious threat and writing about religious experience on the cognitive reflection test need for cognition, and faith in intuition.
Collaboration in 2017 with Bryan Gibson.

Religious threat and writing about religious experience on pseudo-profound beliefs (BRS).
Collaboration in 2017 with Bryan Gibson.

The influence of overvaluation on narcissism: Study 1.
Collaboration in 2016 with Bryan Gibson, and Brad Bushman.

The influence of overvaluation on narcissism: Study 2.
Collaboration in 2016 with Bryan Gibson, and Brad Bushman.

CONFERENCES, POSTERS, AND PRESENTATIONS

Religious decline, political ideology, and authoritarianism.
Poster Session in 2019 – Annual Student Research and Creative Endeavors Exhibition. Mount Pleasant, MI: Central Michigan University.

Facebook and fake news: How misinformation is spread and why we fall for it.
Panel Discussion in 2019 - Mount Pleasant, MI: Central Michigan University.

A meta-analytic evaluation of biased assimilation and polarization.
Experimental Seminar in 2019 - Mount Pleasant, MI: Central Michigan University.

Data Analyst with R – Career Track
- Introduction to R
- Intermediate R
- Introduction to the Tidyverse
- Data Manipulation with dplyr
- Joining Data with dplyr
- Introduction to Data Visualization with ggplot2
- Data Manipulation with data.table in R
- Joining Data with data.table in R
- Introduction to Importing Data in R
- Intermediate Importing Data in R
- Data Cleaning in R
- Exploratory Data Analysis in R
- Case Study: Exploratory Data Analysis in R
- Correlation and Regression in R
- Categorical Data in the Tidyverse
- Communicating with Data in the Tidyverse
- Introduction to SQL
- Introduction to Relational Databases in SQL
- Joining Data in SQL

Machine Learning Scientist with R – Career Track
- Supervised Learning in R: Classification
- Supervised Learning in R: Regression
- Unsupervised Learning in R
- Machine Learning on the Tidyverse
- Multiple and Logistic Regression in R
- Cluster Analysis in R
- Machine Learning with caret in R
- Tree-Based Models in R
- Support Vector Machines in R
- Advanced Dimensionality Reduction in R
- Fundamentals of Bayesian Data Analysis in R
- Topic Modeling in R
- Hyperparameter Tuning in R
- Bayesian Regression Modeling with rstanarm
- Introduction to Spark with sparklyr in R

Has psychology always been so ideologically biased? A historical argument for ideological diversity.
Poster Session in 2018 - SPSP Annual Convention. Atlanta, GA: Society for Personality and Social Psychology.

Religious decline, conservative ideology, and authoritarianism.
Experimental Seminar in 2018 - Mount Pleasant, MI: Central Michigan University.

The influence of physical position and prayer on cognitive style.
Poster Session in 2017 - The Cognition of Belief. Washington, D.C.: John Templeton Foundation.

Replication of ego-depletion and the influence of experimenter presence.
Experimental Seminar in 2017 - Mount Pleasant, MI: Central Michigan University.

The impact of physical position and prayer on cognitive style.
Experimental Seminar in 2017 - Mount Pleasant, MI: Central Michigan University.

Profundity, truth, and BS: An Investigation of the BRS.
Experimental Seminar in 2016 - Mount Pleasant, MI: Central Michigan University.

TEACHING EXPERIENCE

Central Michigan University Psychology Department
Research Methods | Course Instructor (2020)
Research Methods | Course Instructor (2019)
Stress | Course Instructor (2019)
Social Psychology | Course Instructor (2018)
Social Psychology | Course Instructor (2018)
Social Psychology | Course Instructor (2017)
Statistics in Psychology | Teaching Assistant (2017)
Introduction to Psychology | Teaching Assistant (2016)
Developmental Psychology | Teaching Assistant (2016)
Developmental Psychology | Teaching Assistant (2015)

MENTEES/RESEARCH ASSISTANTS

Kourtney Nardone, Meghan Hayden, Elliot Leddy, Erica Jaime, Sharon Werner, Adam Bartley, Jack Barker, Abby Harmon, Carter Bonifas, Gabrielle Harter, Lou Ivey

PROFESSIONAL AFFILIATIONS

Association for Psychological Science
Society for Personality and Social Psychology
Society for the Improvement of Psychological Science

Machine Learning Fundamentals in R – Skills Track
- Supervised Learning in R: Classification
- Supervised Learning in R: Regression
- Unsupervised Learning in R
- Machine Learning with caret in R

Tidyverse Fundamentals with R – Skills Track
- Introduction to the Tidyverse
- Working with Data in the Tidyverse
- Modeling with Data in the Tidyverse
- Communicating with Data in the Tidyverse
- Categorical Data in the Tidyverse

Text Mining with R – Skills Track
- Introduction to Text Analysis in R
- String Manipulation with stringr in R
- Text Mining with Bag-of-words in R
- Sentiment Analysis in R

Python Programmer – Career Track
- Introduction to Data Science in Python
- Data Types for Data Science in Python
- Data Manipulation with pandas
- Python Data Science Toolbox (Part 1)
- Python Data Science Toolbox (Part 2)
- Writing Efficient Python Code
- Working with Dates and Times in Python
- Regular Expressions in Python
- Web Scraping in Python
- Writing Functions in Python
- Introduction to Shell
- Conda Essentials
- Parallel Programming with Dask in Python
- Software Engineering for Data Scientists in Python
- Unit Testing for Data Science in Python

ADVANCED STATISTICAL COURSEWORK

PSY 511 – Statistics in Psychology
PSY 611 – Research Design (Analysis of Variance)
PSY 612 – Applied Multiple Regression/Correlation Correlational Methods
PSY 613 – Multivariate Statistical Methods
PSY 614 – Structural Equation Modeling
PSY 737 – Seminar in I/O Psychology (Meta-Analysis)

REFERENCES

Academic Advisor
Bryan Gibson, PhD
Department of Psychology
Central Michigan University, Mount Pleasant, MI
(989)774-4404
gibso1b@cmich.edu

Mentor
Kyle Scherr, PhD
Department of Psychology
Central Michigan University, Mount Pleasant, MI
(989)774-3001
scher1kc@cmich.edu

Mentor
Christopher Davoli, PhD
Department of Psychology
Central Michigan University, Mount Pleasant, MI
(989)774-3001
davol1cc@cmich.edu

Python Fundamentals – Skills Tracks
- Introduction to Python
- Intermediate Python
- Python Data Science Toolbox (Part 1)
- Python Data Science Toolbox (Part 2)

Marketing Analytics with Python – Skills Track
- Marketing Analytics: Predicting Customer Churn in Python
- Customer Analytics and A/B Testing in Python
- Customer Segmentation in Python
- Machine Learning for Marketing in Python

Data Analyst with SQL Server – Career Track
- Introduction to SQL Server
- Introduction to Relational Databases in SQL
- Intermediate SQL Server
- Time Series Analysis in SQL Server
- Functions for Manipulation Data in SQL Server
- Database Design
- Hierarchical and Recursive Queries in SQL Server
- Transactions and Error Handling in SQL Server
- Writing Functions and Stored Procedures in SQL Server
- Building and Optimizing Triggers in SQL Server
- Improving Query Performance in SQL Server

SQL Server Fundamentals – Skills Track
- Introduction to SQL Server
- Joining Data in SQL
- Intermediate SQL Server
- Time Series Analysis in SQL Server
- Functions for Manipulating Data in SQL Server

You can find a links to every certificate and course that I have taken with DataCamp at datacamp.com/prole/brianlkissell