

# PHIL HENRICKSON

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## SUMMARY

Data Scientist with scientific research background, strong communication skills, and years of industry experience in a client-facing role. Demonstrated experience in scoping, developing, and delivering data/analytics projects, with an emphasis on predictive modeling, causal inference, and data visualization. Accomplished public speaker with featured talks and presentations at conferences and meetups throughout the state of Wisconsin.

## SKILLS

### Languages and Tools

*Proficient:* R, Git/GitHub, SQL, Quarto, Shiny, RMarkdown, Tableau, Alteryx

*Intermediate:* Python, Docker, GCP/AWS/Azure

**Selected Coursework:** Applied Machine Learning, Causal Inference, Statistical Learning, Maximum Likelihood Estimation, Time Series, Research Design, Survey Design

## EDUCATION

### Florida State University

Tallahassee, FL

Doctor of Philosophy: Political Science

Dissertation: *Applied Predictive Modeling for Measurement and Inference in International Conflict and Political Violence*

### Texas A&M University

College Station, TX

Bachelor of Science: Political Science

## EXPERIENCE

### AE Business Solutions

2019-Present

*Data Scientist*

Madison, WI

- Work in a client-facing, project delivery role for data science and analytics use cases across a variety of industries in the public and private sector
- Serve as technical liaison between data science teams and senior leadership, translating complex analyses into actionable recommendations to inform strategic decisions
- Building data pipelines and deploying predictive models within DevOps frameworks
- Assess organizational practices for data science and audit models for performance, fairness, and bias
- Deliver hands-on training and “office hours” advising for clients on topics within the fields of data science

### AE Business Solutions

2018-2019

*Business Intelligence Engineer*

Madison, WI

- Developing interactive dashboards and data visualizations to communicate insights and statistical methods to general public
- Training business and data analysts in research methods, data preparation, and data visualization (R, Alteryx, Tableau)

### Florida State University

2013-2018

*Research Assistant*

Tallahassee, FL

- Performed statistical modeling in R and Stata for prediction and hypothesis testing in social science research.
- Assisted professors by collecting, cleaning, and preparing data sets for data visualization and presentation in academic research papers.
- Literature reviews of sub fields in international relations, comparative politics, statistics, and computer science.

*Instructor*

- Created original syllabi and lecture materials for Political Violence, Civil Wars, and International Relations classes.
- Assigned semester-long research papers, working with students to develop their academic writing skills and mentor their applications for graduate school.
- Taught programming with R to graduate students and held supplementary sessions for statistical modeling and programming.

## PERSONAL PROJECTS

Most of my work with clients is under NDA, making it difficult to provide detailed examples of my work. I do, however, frequently work on side projects in my free time to explore new methods and techniques that I can use in my consultant work. Here are some examples:

## *Predicting Upcoming Board Games*

2022-2023

- Created package for collecting BoardGameGeek (BGG) data to [train predictive models at the BGG community level](#) (complexity, average rating, etc) for upcoming board game releases
- [Trained predictive models for individual users](#) to recommend new games to individuals [based on their collections](#).
- Developed pipelines to collect data on upcoming releases and deliver predictions from a suite of models (penalized linear regressions, xgboost, lightgbm) via GitHub Actions, Google Cloud Storage, and Quarto

## *College Football Predictions and Rankings*

2024

- Estimating [opponent-adjusted team offensive/defensive efficiency](#) for all FBS teams at the weekly level using play by play data and [predicted points added per play](#).
- Use team efficiency ratings as inputs into my (Bayesian) game prediction model to [estimate team ratings](#) and [simulate upcoming college football games](#).