

A computational scientist with methodological contributions ranging from designing experiments and automated ETL pipelines to optimizing, explaining and visualizing complex models using the most modern tools in R and Python. An exceptional candidate for those seeking a scientist with rigorous training in probability theory and statistics and hands-on experience with modern machine and deep learning methods.

## SKILLS

**TOOLS AND LANGUAGES** PYTHON | R | MYSQL | SQLITE  
**FRAMEWORKS & LIBRARIES** JUPYTER | BEAUTIFULSOUP | NUMPY | PANDAS | SCIKIT-LEARN | SQLALCHEMY | RSQLITE  
**OTHER TECHNOLOGIES** HTML | ARCGIS | STATA | GIT | L<sup>A</sup>T<sub>E</sub>X | MARKDOWN

## AWARDS AND CERTIFICATES

<b>RESEARCH SEED GRANT</b>	WASHINGTON UNIVERSITY IN SAINT LOUIS	NOVEMBER 2020
<b>DIVERSITY FELLOWSHIP</b>	SAINT LOUIS UNIVERSITY	JUNE 2016
<b>FUNDAMENTALS OF G.I.S.</b>	UNIVERSITY OF CALIFORNIA, DAVIS	SEPTEMBER 2020

## PROJECTS

**HOW NEWS SHAPES DISCOURSE: COLLECTED AND ANALYZED TWEETS FROM NEWS ORGANIZATIONS** JUNE 2020-PRESENT  
BIG DATA, CAUSAL INFERENCE, DATA ENGINEERING, POLITICAL COMMUNICATION

- Collected a novel dataset of Twitter posts and comments to explore variation in communication styles across 30 different professional news outlets
- Implemented extract, transform, load pipeline that processed 100+ gb of data using Python tools such as Twitter API v2, requests, json, SQLAlchemy (SQLite) and nltk
- Automated collection and cleaning tasks to allow multiple colleagues to contribute to the data collection process
- Analyzed data using methods such as sentiment analysis, cosine similarity and latent dirichlet allocation
- Contributed to forthcoming book project by demonstrating the real world implications of different news organization features using causal inference methods

**WHAT IS A POLITICAL ADVERTISEMENT?: TWO EXPERIMENTS ON PUBLIC OPINION** DECEMBER 2021  
DATA ENGINEERING, DATA VISUALIZATION, CONJOINT EXPERIMENT, POLITICAL ADVERTISING

- Explored what makes a social media advertisement political according to users
- Transformed and analyzed data to determine preferences toward social media (political) advertising regulation using a conjoint experiment and a survey experiment
- Translated complex statistical outcomes into appealing and easy-to-understand visualizations
- Managed data from receipt until recent submission for review at Proceedings of the National Academy of Sciences of the United States of America (PNAS)

**PREDICTING HETEROGENEOUS TREATMENT EFFECTS USING ENSEMBLE BAYESIAN MODEL AVERAGING (EBMA): TUNING HYPER-PARAMETERS FOR IMPROVED ELECTION PREDICTIONS** JULY 2022  
MACHINE LEARNING, ENSEMBLE MODELS, BAYESIAN STATISTICS, PREDICTIVE MODELS, MISINFORMATION

- Predicted how well individuals' can identify fake news headlines with a randomly assigned intervention displaying Facebook's 'Tips to Spot Fake News'

- Implemented methods including LASSO, Elastic Net, Bayesian GLM, BART, Random Forest and SVM-SMO
- Adjusted hyper-parameters for best prediction across models and pooled the results to attain an ensemble prediction
- Demonstrated success of colleagues' R package (*EBMAforecast*) in predicting heterogeneous treatment effects and presented as poster at The Society for Political Methodology's Annual Conference

**MISINFORMATION AND IN-GROUP CORRECTIONS: DESIGNING AND IMPLEMENTING SURVEY EXPERIMENT** **SEPTEMBER 2022**  
RESEARCH DESIGN, DATA ANALYSIS, DATA VISUALIZATION, GRANT WRITING, MISINFORMATION

- Designed a novel experiment relying on fake Facebook posts to analyze if/when corrections to misinformation are effective
- Prepared and submitted documents for IRB approval and pre-registration of our experimental expectations
- Implemented a pilot survey to refine the research questions before distributing the survey to a nationally-representative sample that included an oversampling of Black and Latino participants

**"FAKE NEWS" MAY HAVE LIMITED EFFECTS: ANALYZING REAL-WORLD AND SURVEY DATA** **JULY 2022**  
RESEARCH DESIGN, DATA ANALYSIS, DATA VISUALIZATION, PUBLICATION, MISINFORMATION

- Designed a novel experiment relying on experimental and observational data to observe traits causally related to belief in misinformation
- Analyzed and visualized observational data related to participants' web traffic
- Prepared and submitted research data to Harvard Dataverse repository to allow for transparency in our methods and findings

## EXPERIENCE

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**INSTRUCTOR: INTRODUCTION TO PYTHON FOR DATA ANALYSIS** **JUNE 2020 — PRESENT**  
WASHINGTON UNIVERSITY IN SAINT LOUIS **SAINT LOUIS, MO**

- Created curriculum and materials for a virtual learning environment
- Instructed students on facets of Python, git, JupyterLab and other relevant technologies
- Evaluated students' progress via designed assessment tasks
- Adjusted instructional needs to meet the needs of students with a wide range of coding experience

**VICE CHAIR OF SPECIAL BUSINESS DISTRICT** **MARCH 2021 — DECEMBER 2022**  
TOWER GROVE SOUTH **SAINT LOUIS, MO**

- Helped oversee the allocation of property taxes towards safety and cleanliness measures in the Saint Louis neighborhood Tower Grove South
- Redesigned and maintain the special business district's website for a more streamlined and informative interface
- Attended monthly meetings and field questions from the public about the progress of neighborhood improvement projects and services

**ASSISTANT IN INSTRUCTION** **AUGUST 2018 — DECEMBER 2021**  
WASHINGTON UNIVERSITY IN SAINT LOUIS **SAINT LOUIS, MO**

- Digital Politics Social Media and Misinformation
- Quantitative Political Methodology

- **Political Data Science**
- **Immigration, Identity and the Internet**
- Constitutionalism
- Justice Virtue and the Soul
- Theories of Social Justice

## PUBLICATIONS

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Guess, Andrew, Dominique Lockett , Benjamin Lyons, Brendan Nyhan, Jacob M. Montgomery, and Jason Reifler. 2020. "“Fake news’ may have limited effects beyond increasing beliefs in false claims.” The Misinformation Review.

Edelson, Laura, Dominique Lockett , Jacob Montgomery, Damon Mccoy, Tobias Lauinger, Celia Guillard“US Public Opinion Towards Platform Regulation of Political Advertisements: Discontent and Consensus for Reform" (Forthcoming)

Lockett, Dominique. Using Objectivity to Improve Argument Evaluations. (Forthcoming)

## EDUCATION

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<b>PH.D. IN POLITICAL SCIENCE</b>	WASHINGTON UNIVERSITY IN SAINT LOUIS	AUGUST 2017 — MAY 2023
<b>M.A. IN POLITICAL SCIENCE</b>	SAINT LOUIS UNIVERSITY	AUGUST 2016 — MAY 2017
<b>B.A. POLITICAL SCIENCE (CUM LAUDE)</b>	SAINT LOUIS UNIVERSITY	AUGUST 2013 — MAY 2016
<b>A.A. COMMUNICATION</b>	IVY TECH COMMUNITY COLLEGE	AUGUST 2009 — MAY 2012