

Ph.D. candidate focused on answering social science questions with big data. Experience in designing strong experimental and causal inference tests, implementing appropriate statistical models (frequentist or Bayesian), and optimizing machine learning algorithms for predictive tasks.

## SKILLS

<b>TOOLS AND LANGUAGES</b>	PYTHON   R   MYSQL   SQLITE
<b>FRAMEWORKS &amp; LIBRARIES</b>	JUPYTER   BEAUTIFULSOUP   NUMPY   PANDAS   SCIKIT-LEARN   SQLALCHEMY   RSQLITE
<b>OTHER TECHNOLOGIES</b>	HTML   ARCGIS   STATA   GIT   $\text{\LaTeX}$   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) 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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**VICE CHAIR OF SPECIAL BUSINESS DISTRICT** **MARCH 2021 — PRESENT**  
TOWER GROVE SOUTH SAINT LOUIS, MO

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

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

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

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