

# JAE YEON KIM

## Overview

- Computational social scientist: using data science to study the politics of diversity and inclusion
- Research software developer: building tools that make digital data collection easier and faster
- Experience: analyzing survey, experimental, administrative, and text data using statistical and machine learning methods



## EDUCATION

- 2016  
|  
Present
- **University of California, Berkeley**  
PhD Candidate in Political Science Berkeley, California, USA
- Summer  
2019
- **Summer Institute in Computational Social Science**  
Participant (10% acceptance rate) Princeton University, Princeton, USA
- 2014  
|  
2016
- **University of California, Berkeley**  
MA in Political Science Berkeley, California, USA
- 2012
- **Korea University**  
BA in Political Science and English Seoul, South Korea



## PROFESSIONAL EXPERIENCE

- May  
2019  
|  
Present
- **Senior Data Science Fellow, Instructor, and Statistical Consultant**  
**Data-intensive Social Sciences Lab** UC Berkeley
- Created a Shiny-based dashboard for human labeling and machine prediction outcomes of the [D-Lab's Online Hate Speech Index Project](#)
  - Consulted 60+ Berkeley faculty, students, and staff on applied statistics, machine learning, and database management
  - Developed seven original data science workshops ([Machine Learning with Tidymodels](#), [Fairness and Bias in Machine Learning](#), [SQL for R Users](#), [R Package Development](#), [Functional Programming in R](#), [Advanced Data Wrangling in R](#), and [Reproducible Project Management in R](#))
  - Taught programming fundamentals, data wrangling, machine learning, and project management
  - Structured and streamlined consulting and workshop production

Last updated on 2020-10-22.

## CONTACT INFO

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For more information, please contact me via email.

## COURSEWORK

Statistical and Causal Inference, Experimental Design, Survey Methods, Game Theory, Computational Social Science

Passed [Political Behavior](#) (social and cognitive psychology, survey and experimental design) field exam with distinction

## SKILLS

📊 **Quantitative:** Statistical and causal inference, Experimental and survey design

💻 **Computational:** Natural language processing, Machine learning, R (tidyverse, tidymodels, statistical packages), Python (pandas, scikit-learn), Git, SQL (PostgreSQL), NoSQL (MongoDB), Linux Command Line

September  
2020  
|  
Present

### Visiting Student Fellow

P3 Lab, SNF Agora Institute

📍 Johns Hopkins University,

- Collaborated with Milan de Vries (former Director of Analytics at MoveOn.Org)
- Parsed more than 3 million tax reports ([XML files stored in Amazon AWS](#)) filed by nonprofits in the United States and linked this data source with these organizations' websites and social media handles
- Designed and built a data infrastructure that tracks civic organizations in the US and their relationships with food security, polarization, and the 2020 racial justice movement

Spring  
2020

### Data Science Education Program Fellow

Data Science Education Program

📍 UC Berkeley

- Served as research lead for the undergraduate students and project partners involved in 40+ [data science discovery projects](#)
- Taught original [workshops](#) on project management, computational reproducibility, bias in machine learning, and data visualization
- Published [an article](#) on project management in SAGE Ocean, an initiative from SAGE Publishing focusing on computational social science

Fall 2016  
|  
Present

### Graduate Student Instructor

Department of Political Science

📍 UC Berkeley

- Developed and taught an original graduate-level course on [computational tools for social science research](#) as an instructor ([original online textbook](#))
- Taught an undergraduate-level applied statistics as a teaching assistant and received [the outstanding graduate student instructor award](#), which is given to less than 10% of Berkeley TAs

★ **Fellowships:** D-Lab Data Science Fellowship, UC Berkeley (2020), Data Science Education Program Fellowship, UC Berkeley (2020), American Democracy Project Fellowship, UC Berkeley (2019), California Poverty and Socioeconomic Inequality Fellows Program, the Blum Initiative for Global and Regional Poverty Studies (2017), Berkeley Empirical Legal Studies Graduate Fellowship, Center for the Study of Law and Society, UC Berkeley (2017)

## 🖥️ SOFTWARE

**tidytweetjson:** R package for turning Tweet JSON files into a cleaned and wrangled dataset. The package takes 12.34 seconds to turn 5,685 articles into a tidy dataframe.

**tidyethnicnews:** R package for turning search results from one of the largest databases on ethnic newspapers and magazines published in the United States into a cleaned and wrangled dataset. The package takes 4 minutes to turn 2 million tweets into a tidy dataframe.

**makereproducible:** R package for making a project computationally reproducible before sharing it.

## 🧪 RESEARCH EXPERIENCE

Summer  
2020  
|  
Present

### Large-scale Twitter Analysis on COVID-19 and Anti-Asian Climate [\[GitHub\]](#) [\[Preprint\]](#)

PhD Candidate

📍 UC Berkeley

- Developed an [R package](#) that automates parsing a large Tweet JSON file (>5GB) into a cleaned and wrangled dataset
- Applied dynamic topic modeling to 1.4 million tweets and traced the rise of anti-Asian sentiment in the post-pandemic US
- Presented at the 2020 American Political Science Association annual meeting
- Co-authored a [preprint](#)

🏆 **Awards:** Don T. Nakanishi Award for Distinguished Scholarship and Service in Asian Pacific American Politics, Western Political Science Association (2020), Outstanding Graduate Student Instructor Award, UC Berkeley (2016)

Fall 2019  
|  
Present

## Causal Inference and Machine Learning [GitHub] [Preprint] [Slides]

PhD Candidate

📍 UC Berkeley

- Developed an [R package](#) that automates parsing ethnic newspaper articles (in HTML format) into a cleaned and wrangled dataset
- Used a natural experiment and machine learning to examine how threats prompt information seeking among marginalized populations
- Presented at [the joint Political Computational Social Science and Political Network 2020 Conference](#) and [the Berkeley Computational Social Science Forum](#)
- Co-authored a [preprint](#)

Spring  
2020

## Intersectional Bias in Hate Speech and Abusive Language Detection Datasets [GitHub] [Preprint] [Slides]

PhD Candidate

📍 UC Berkeley

- Classified gender, racial, and party identities of the 100k tweets
- Demonstrated African American tweets were up to 3.7 times more likely to be labeled as abusive, and African American male tweets were up to 77% more likely to be labeled as hateful compared to the others
- Published the paper version in [Proceedings of the Fourteenth International Conference on Web and Social Media \(ICWSM\), Data Challenge Workshop](#)

Fall 2018  
|  
Spring  
2019

## Natural Language Processing and Machine Learning [GitHub] [Preprint] [Slides]

PhD Candidate

📍 UC Berkeley

- Demonstrated unreliable training data generates weak predictions and extreme interpretations using 80k+ ethnic newspaper articles
- Received [the Best Paper Award in Asian Pacific American Politics](#) from the Western Political Science Association (2020)
- Authored a preprint, which was conditionally accepted at the [Journal of Computational Social Science](#)

2016  
|  
2018

## Statistical Modeling of Time Series Data [GitHub] [Preprint]

PhD Candidate

📍 UC Berkeley

- Examined how social policy influenced community organizing among Asian Americans and Latinos by creating an original [organizational dataset](#) and modeling time-series data
- Authored a preprint, which was invited to Revise and Resubmit at [Political Research Quarterly](#)

2019  
|  
Spring  
2020

## Survey and Experimental Research [GitHub] [Preprint]

PhD Candidate

📍 UC Berkeley

- Designed a within-subject experiment and embedded it in a California-wide survey to investigate how different racial groups interpret questions on racial solidarity differently
- Authored a [preprint](#)

Summer  
2018

## Survey Research [GitHub]

Graduate Student Researcher

📍 UC Berkeley

- Cleaned and wrangled the largest panel survey data on Asian Americans and conducted factor and regression analysis



## ORGANIZING EXPERIENCE



### **Summer Institute in Computational Social Science in the San Francisco Bay Area**

Co-organizer

📍 August 2019 - July 2020

- Raised 50k+, reviewed 100+ applicants and selected 20 participants
- Developed close partnerships with Bay Area nonprofits (e.g., Code for America, DonorsChoose, Hopelab)
- Designed the curriculum, guided the project development and developed the evaluation criteria
- Published a [blog post](#) on the [Berkeley Institute of Data Science](#) website that highlights the key accomplishments of the Summer Program Institute