

# Jeffrey Power Jacobs

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## EMPLOYMENT

### Georgetown University

*Assistant Teaching Professor, Data Science and Analytics*

Washington, DC, USA

Aug 2023 – Present

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## EDUCATION

### Columbia University

*PhD in Political Science*

*MA, MPhil in Political Science*

New York, NY, USA

Sep 2022

May 2016, May 2018

### Stanford University

*MS in Computer Science*

Palo Alto, CA, USA

May 2014

### University of Maryland

*BS in Mathematics, BS in Computer Science, BA in Economics*

College Park, MD, USA

May 2012

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## DISSERTATION

**“Our Word is Our Weapon”:** Text-Analyzing Wars of Ideas from the French Revolution to the First Intifada

Committee: Suresh Naidu (Chair), Jon Elster, Naoki Egami, Nadia Urbinati, Alexander Gourevitch (Brown University), William Clare Roberts (McGill University)

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## PEER-REVIEWED PUBLICATIONS

[1] E. Ash, **J. Jacobs**, B. MacLeod, S. Naidu, D. Stammach. “Unsupervised Extraction of Workplace Rights and Duties from Collective Bargaining Agreements.” *Proceedings of the 20th IEEE International Conference on Data Mining – International Workshop on Mining and Learning in the Legal Domain (ICDM-MLLD)*. 2020.

[2] A. Dube, **J. Jacobs**, S. Naidu, S. Suri. “Monopsony in Online Labor Markets.” *American Economic Review: Insights*, (2)1: 33-46. 2020.

[3] **J. Jacobs**. “How to Do Things with Translations: Cross-Lingual Phrase Embeddings for Translation Analysis.” *Ninth Annual Conference on New Directions in Analyzing Text as Data (TADA)*. 2018.

[4] D. Shahaf, J. Yang, C. Suen, **J. Jacobs**, H. Wang, J. Leskovec. “Information Cartography: Creating Zoomable, Large-Scale Maps of Information.” *Proceedings of the ACM International Conference on Knowledge Discovery and Data Mining (KDD)*, 1097-1105. 2013.

[5] C. Duan, H. Gao, **J. Jacobs**, W. Wu. “Metaheuristic Approaches to Resource Scheduling in Heterogeneous Wireless Networks.” *Joint Mathematics Meetings (JMM)*. 2012.

[6] **J. Jacobs**, J. Reggia. “Evolving Musical Counterpoint: The Chronopoint Genetic Algorithm.” *Proceedings of the 2011 IEEE Congress on Evolutionary Computation*, 11-16. 2011.

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## OTHER PUBLICATIONS

**J. Jacobs**, S. Naidu. “Power in Equilibrium: An Economic Measure of Secured Non-Domination.” In *Liberty: Philosophical, Political, and Economic Perspectives* (forthcoming), Cambridge University Press. 2023.

**J. Jacobs**. “Automated Content Analysis and the 1789 *Cahiers de Doléances*.” *Phenomenal World Blog*, Jain Family Institute. 2022. <https://phenomenalworld.org/>

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## TEACHING EXPERIENCE

### Georgetown University

DSAN 5000: Data Science and Analytics

Fall 2023

DSAN 5100: Probabilistic Modeling and Statistical Computing

Fall 2023

## New York University

DSUA 111: Data Science for Everyone

Spring, Summer-I, Summer-II, Fall 2020

## Columbia University

QMSS 5067: Natural Language Processing for the Social Sciences

Summer 2021

HRTS 3001: Introduction to Human Rights

Spring 2021

POLS 4700: Mathematical Methods for Political Science

Fall 2018

POLS 4710: Principles of Quantitative Political Research

Fall 2017

POLS 1201: Introduction to American Politics

Fall 2016

## Stanford University

CS 109: Probability Theory for Computer Scientists

Winter 2014, Spring 2014

CS 103: Mathematical Foundations of Computing

Autumn 2012, Winter 2013, Autumn 2013

CS 221: Artificial Intelligence Principles and Techniques

Summer 2013

CS 90SI: Code the Change: Learn Web Development Through Non-Profit Projects

Autumn 2013

## University of Maryland

CMSC 420: Data Structures

Spring 2012

CMSC 250: Discrete Mathematics

Fall 2011

MATH 003: Developmental Mathematics

Fall 2010, Spring 2011

CMSC 132: Object-Oriented Programming II

Spring 2010

## Workshops/Short Courses

*Jain Family Institute Seminar*

New York, NY

Let's Get Free: A Gentle Introduction to Analytical Political Theory

(Postponed to 2023)

*(Postponed due to COVID-19, draft of lecture notes available on [GitHub](#))*

*Code for Palestine Summer Courses*

West Bank & Gaza, Occupied Palestinian Territories

Mobile App Development with React Native

Summer 2022

Design Thinking for Mobile App Development

Summer 2019

Web Development with Flask and MySQL

Summer 2018

Mobile App Development with Android Studio

Summer 2017

*Stanford Splash! Program*

Palo Alto, CA, USA

Game Theory and Mechanism Design

Autumn 2013, 2014

Pledge No Allegiance: America Through A Hip Hop Lens

Autumn 2014

## PREVIOUS EMPLOYMENT

**Columbia University Department of Economics**

New York, NY, USA

*Research Assistant, Columbia TextLab, Data Science Institute*

Jan 2021 – Jul 2023

**NYU Center for Data Science (CDS)**

New York, NY, USA

*Curriculum Development Fellow, Adjunct Instructor*

Jan 2020 – Dec 2020

**Columbia School of International and Public Affairs (SIPA)**

New York, NY, USA

*RA, Institute for Social and Economic Research and Policy (ISERP)*

Jan 2016 – Dec 2019

<b>University of California, Berkeley</b> <i>Research Data Analyst, Dept. of Economics &amp; Haas School of Business</i>	Berkeley, CA, USA Jun 2014 – Jun 2015
<b>Stanford University Department of Economics</b> <i>Research Assistant, Development Economics Group</i>	Palo Alto, CA, USA Sep 2013 – Jun 2014
<b>Stanford University Computer Science Department</b> <i>Research Assistant, Stanford Network Analysis Project (SNAP)</i>	Palo Alto, CA, USA Sep 2012 – Apr 2013
<b>National Institute of Standards and Technology (NIST)</b> <i>Summer Research Fellow, Quantum Communications Lab</i>	Gaithersburg, MD, USA May 2012 – Aug 2012
<b>University of Maryland Dept. of Computer Science</b> <i>Research Assistant, Algorithms and Theory Group</i>	College Park, MD, USA Aug 2011 – Aug 2012
<b>Hong Kong University of Science and Technology</b> <i>Summer Research Fellow, Dept. of Mathematics</i>	Clearwater Bay, Hong Kong May 2011 – Aug 2011
<b>University of Maryland Dept. of Computer Science</b> <i>Research Assistant, Biologically-Inspired Computing Group</i>	College Park, MD, USA Aug 2010 – May 2011
<b>University of Illinois at Urbana-Champaign</b> <i>Summer Research Fellow, Brain-Computer Interface Lab</i>	Urbana-Champaign, IL, USA May 2010 – Aug 2010

## WORKING PAPERS

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- “Threadsheets: An Interactive Visualization Tool for Data Concordance Analysis”  
Submitted to *Journal of Statistical Software*, 2023
- “Against Europe’s Dangerous Creation Myth: How Decolonization and the Cold War Shaped the EU”  
with Katie Ebner-Landy, Harvard University
- “Quantifying Cultural Diplomacy: Soviet-Third World Ideological Interventions”  
(Working draft available upon request)
- “Counterfactual Document Generation for Causal Inference Using Text Data”  
with Thomas Leavitt, Columbia University
- “scipot: Topic Modeling in Reverse for Synthetic Document Generation”  
GitHub Homepage: [scipot.github.io](https://scipot.github.io)

## INVITED TALKS

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- “How to Do Things with Translations: Cross-Lingual Semantic Phrase Embeddings for Translation Analysis”  
*Theories of Translation Workshop*, Ohio State Univ., Columbus, OH, USA Feb 2021
- “‘Our Word is Our Weapon’: Language, Resistance, and Revolution”  
Columbia Natural Language Processing Lab, Columbia University, New York, NY, USA Nov 2019
- “Fi Hadal Habs: Text-Analyzing the Underground Communiques of the Palestinian Intifadas”  
Critical Media and Digital Studies Workshop, Columbia University, New York, NY, USA Oct 2018
- “The Point is to Change It: Theoretical Innovation and Political Practice in the History of Marxism”  
2018 Graduate Workshop in Computational Social Science, Santa Fe Institute, Santa Fe, NM, USA Jun 2018

“Automated Content Analysis and the 1789 *Cahiers de Doléances*”

5th Annual Politics and History Conference, University of Barcelona, Barcelona, Spain

Jun 2018

“Word Embeddings: Can Vectors Encode Meaning?”

NYC Digital Humanities Week, Columbia University, New York, NY, USA

Feb 2018

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## PROFESSIONAL SERVICE

### Editorial Boards:

New translation of Karl Marx, *Capital*, Vol. 1, forthcoming, Princeton University Press

Fall 2023

### Program Committees:

**ACL:** Annual Meeting of the Association for Computational Linguistics

Main Conference

Jul 2023, Jul 2022, Jul 2020

Student Research Workshop

Jul 2023, May 2022, Jul 2020, Jul 2019

**EACL:** Conference of the European Chapter of the ACL

Sep 2023

**IC2S2:** International Conference on Computational Social Science

Jul 2023, Jul 2022

**EMNLP:** Empirical Methods in Natural Language Processing

Sep 2022

**ACL-IJCNLP:** International Joint Conference on NLP

Student Research Workshop

Nov 2022, Aug 2021, Sep 2020

**NAACL-HLT:** NAACL Human Language Technologies

Main Conference

Jul 2022

Student Research Workshop

Jun 2021

**SSCI:** IEEE Symposium Series on Computational Intelligence

Jun 2013

### Discussant:

“Real-World Impacts of Political and Legal Texts”, Princeton University

May 2017

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## AWARDS & ACHIEVEMENTS

Distinction in Quantitative Methods Field Exam, Columbia Political Science Dept.

Jan 2018

Departmental Honors, University of Maryland Department of Computer Science

May 2012

Departmental Honors, University of Maryland Department of Mathematics

May 2012

Senior Outstanding Achievement Award (4.0 major GPA), UMD Dept. of Economics

May 2012

2011 Project of the Year, UMD QUEST Honors Program Senior Conference

Dec 2011

QUEST Business Engineering Honors Fellow, Smith School of Business

Aug 2009 – May 2012

Science, Technology, and Society Scholar, Clark School of Engineering

Aug 2008 – May 2012

Dean’s List, College of Computer, Mathematical, and Natural Sciences

Aug 2008 – May 2012

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## TECHNICAL SKILLS

**Languages:** Python, R, Stata, JS/TS, HTML/CSS, PHP, Shell Scripting, SQL, MATLAB, Java, C, C++, Ruby

### Frameworks/Packages:

**Data Science:** Pandas, Seaborn, tidyverse, ggplot2

**Deep Learning:** Huggingface Transformers, PyTorch

**NLP:** spaCy, Gensim, Stanza/CoreNLP, tidytext

**Machine Learning:** scikit-learn, e1071, DoubleML

**Network Analysis:** NetworkX, nxviz, Gephi, igraph

**Web Dev:** Node.js, React, D3, jQuery, Apache/Nginx

**Cloud Computing:** GCP, AWS (EC2, S3, Lambda)

**Misc:** Git, MongoDB, Qualtrics, VirtualBox, CUDA

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## LANGUAGES

[Native] English [Working Proficiency] Spanish [Reading Proficiency] German, French, Arabic, Russian

## REFERENCES

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### **Suresh Naidu**

*Professor of Economics and Public Affairs*  
Columbia University  
New York, NY, USA  
[sn2430@columbia.edu](mailto:sn2430@columbia.edu)

### **Alex Gourevitch**

*Associate Professor of Political Science*  
Brown University  
Providence, RI, USA  
[Alexander\\_Gourevitch@brown.edu](mailto:Alexander_Gourevitch@brown.edu)

### **Joshua Simon**

*Assistant Professor of Political Science*  
Johns Hopkins University  
Baltimore, MD, USA  
[jsimon38@jhu.edu](mailto:jsimon38@jhu.edu)

### **Elliott Ash**

*Assistant Professor of Law, Economics,  
and Data Science, ETH-Zürich*  
Zürich, Switzerland  
[ashe@ethz.ch](mailto:ashe@ethz.ch)

### **Jon Elster**

*Robert K. Merton Professor of the  
Social Sciences, Columbia University*  
New York, NY, USA  
[je70@columbia.edu](mailto:je70@columbia.edu)