# Jacob Carlson

CONTACT INFORMATION jacob\_carlson@g.harvard.edu https://jscarlson.github.io

**EDUCATION** 

**Harvard University**, Cambridge, Massachusetts Ph.D. Economics, August 2022 – Present

Yale University, New Haven, Connecticut

B.A. Statistics and Data Science, August 2016 – May 2020 B.A. Ethics, Politics, and Economics, August 2016 – May 2020

Summa cum laude with distinction in both subjects

HONORS AND AWARDS Presidential Scholar (Harvard University) Phi Beta Kappa (Yale University)

Forethought Foundation for Global Priorities Research Undergraduate Thesis Prize Winner for undergraduate thesis titled "Culture and Growth: An Empirical Investigation" (2020)

PEER-REVIEWED PUBLICATIONS Shen, Zejiang, Ruochen Zhang, Melissa Dell, Benjamin Lee, **Jacob Carlson**, and Weining Li. "LayoutParser: A Unified Toolkit for Deep Learning Based Document Image Analysis." In International Conference on Document Analysis and Recognition – ICDAR 2021 (pp. 131–146). Springer International Publishing, 2021. *Oral presentation*.

WORKING PAPERS **Carlson, Jacob**, Tom Bryan, and Melissa Dell. "Efficient OCR for Building a Diverse Digital History." arXiv preprint arXiv:2304.02737 (2023).

**Carlson, Jacob**, Trevor Incerti, and P. M. Aronow. "Dyadic Clustering in International Relations." arXiv preprint arXiv:2109.03774 (2021). *Conditionally accepted at Political Analysis*.

ACADEMIC POSITIONS

#### Harvard University, Cambridge, Massachusetts

Research Assistant

May 2023 – Present

• Assisting Isaiah Andrews and Davide Viviano, respectively, with various projects on topics in theoretical and applied econometrics

### Harvard University, Cambridge, Massachusetts

Data Science Fellow in Deep Learning

September 2020 – May 2022

- Worked with Melissa Dell to develop deep learning methods and tools for social science data curation, e.g.,
  - Engineered and deployed a deep learning pipeline that converted tens of millions of American newspaper document images into a structured text database
  - Built information retrieval models trained for natural language inference to facilitate better zero-shot search of a multi-terabyte corpus of text
  - Designed and implemented a new sample efficient deep learning architecture for optical character recognition (OCR) in order to accurately digitize firm-level financial reports in low-resource languages

### Yale University, New Haven, Connecticut

Research Assistant

September 2018 – August 2018

Worked with Yusuke Narita on an applied microeconomics project aimed at better understanding the effectiveness of "evidence-based" policies across the United States

• Web-scraped data, estimated causal effects, and performed sensitivity analyses to support an evaluation of Obama-era public policies that reached 2,500+ U.S. counties

#### Yale Law School, New Haven, Connecticut

Research Assistant

May 2017 - May 2019

- Collaborated with Kate Stith and a small team of law students on a quantitative research project investigating mandatory minimum sentencing trends across DOJ administrations
- Authored web-scraping and text analysis code that was used to assemble a novel database that tracked the filings of "section 851" sentencing enhancements in every U.S. district court over the past two decades

Non-

#### Cornerstone Research, New York, New York

ACADEMIC POSITIONS

Summer Analyst

May 2019 – July 2019

- Performed financial and economic analyses for Fortune 500 clients undergoing complex commercial litigation
- Coded market simulations that were produced as evidence in court for a multi-million dollar class action lawsuit
- Evaluated and replicated conjoint analyses using national survey data

## Office of U.S. Senator Richard Blumenthal, Hartford, Connecticut

Intern

June 2016 – July 2016

- Managed healthcare and immigration casework for about a half dozen residents of Connecticut
- Researched United States federal immigration law on behalf of assigned constituents

**TEACHING** 

## Harvard University, Cambridge, Massachusetts

*Unleashing Novel Data at Scale* (ECON 2355)

- Sole teaching assistant for this graduate course in the department of economics instructed by Melissa Dell
- Received an average overall section leader rating of 5.00 ("excellent") and a Harvard University Certificate of Distinction in Teaching
- Selected student comments: "Deeply knowledgeable and good at communicating complex technical concepts"; "Jacob is an incredible TF who was always accessible outside of class, eager to help, and very knowledgeable. One of the best I've had"

PRESENTATIONS

Allied Social Science Associations (ASSA) 2022 Virtual Annual Meeting

• Presented "LayoutParser: A Unified Toolkit for Deep Learning Based Document Image Analysis" at the "Nonstandard Data Sources" paper session on January 8, 2022

LEADERSHIP

Yale Policy Lab Working Group on Infrastructure Policy in Connecticut

Founder September 2019 – May 2020

- Headed undergraduate policy research group with support from the Yale Institution for Social and Policy Studies
- Partnered with former Connecticut State Senator Alex Kasser to provide qualitative and quantitative insights into the likely impacts of her pending state infrastructure bank bill

LAST UPDATED June 7, 2023