

Sebastian Steffen

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Curriculum Vitae Version: February 2024

EMPLOYMENT

- Boston College Carroll School of Management**, Boston, MA 2022 – Present
- [Assistant Professor, Business Analytics Department](#)
 - Teaching:
 - ISYS3340: Data Analytics in Practice
 - ISYS3350: Data Management for Analytics and Applications
- Stanford Digital Economy Lab (S-DEL)**, Stanford, CA 2022 – Present
- [Digital Fellow](#)
- MIT Initiative on the Digital Economy (MIT-IDE)**, Cambridge, MA 2022 – Present
- [Digital Fellow](#)

EDUCATION

- MIT Sloan School of Management**, Cambridge, MA 2016 – 2022
- Ph.D. in Management
 - Dissertation: Essays on Information Technologies, Human Capital, and the Future of Work
 - Dissertation Committee: Erik Brynjolfsson, Sinan Aral, John Horton
 - Focus areas: Information Technology, Future of Work, Human Capital
- MIT Sloan School of Management**, Cambridge, MA 2016 – 2020
- Master of Science in Management Research
- Princeton University**, Princeton, NJ 2009 – 2013
- Bachelor of Arts in Economics, *magna cum laude*

PAPERS

Publications:

- [How to Get More from the Cloud: Three Talent Strategies You're Probably Neglecting](#) (with Wang Jin, Kenneth Munie, and Prashant Shukla). *California Management Review*, January 2024.
- [Your Company Will Need Remote Work as Extreme Weather Gets Worse](#) (with John Bai, Erik Brynjolfsson, Wang Jin, and Chi Wan). *Harvard Business Review*, November 2023.
- [What Makes the Jobs of Tomorrow? The “What” and “Why” of Labor Outcomes from Technological Change](#) (with Christophe Combemale, Jenna Myers, Anna Waldman-Brown, Laurence Ales, Erik Brynjolfsson, Erica Fuchs, and Kate Whitefoot). *Proceedings of the Academy of Management*, July 2021.
- [Learning Occupational Task-Shares Dynamics for the Future of Work](#) (with Subhro Das, Wyatt Clarke, Prabhat Reddy, Erik Brynjolfsson, and Martin Fleming). *Proceedings of the AAAI/ACM Conference on AI, Ethics, and Society*, February 2020.

Working Papers:

- [Human Capital Acquisition in Response to Data Breaches](#) (with Sarah Bana, Erik Brynjolfsson, Wang Jin, and Xiupeng Wang). *SSRN Working Paper*, March 2021. 2nd Round R&R at *MISQ*.
- [The Stanford IT Tables: A Suite of Firm and Industry Metrics for Technology Use](#) (with Erik Brynjolfsson and Wang Jin). July 2022.

- [Digital Resilience: How Work-From-Home Feasibility Affects Firm Performance](#) (with John Bai, Erik Brynjolfsson, Wang Jin, and Chi Wan). *NBER Working Paper No. 28588*, March 2021.
- *Work2Vec: Learning a Representation of Jobs* (with Sarah Bana, Erik Brynjolfsson, and Daniel Rock). February 2021.
- [Occupational Skill Compositions and the Values of Skills: Panel Estimates from 200 million online Job Postings](#). July 2021.

The U.S. Federal Statistical Research Data Center (FSRDC) Projects:

- Firms Characteristics, Technology Adoption, and Labor Market Outcomes (Census Approved, Under IRS Review).
- Validating and Improving the ASM-MOPS (Census Internal, Active).

Work in Progress:

- Technological Change, Innovation, and the Life Cycles of Skills.
- Competing for IT Talent: Market Concentration and the Demand for Frontier IT Skills in the Digital Age (with Wang Jin, and Erik Brynjolfsson).

Blog Posts:

- [Concentration of Artificial Intelligence and other Frontier IT Skills](#) (with Wang Jin and Georgios Petropoulos). October 2021.

PATENTS

- *Methods and System for Skills & Tasks Demand Forecasting* (with Subhro Das, Wyatt Clarke, Prabhat Reddy, Erik Brynjolfsson, and Martin Fleming). U.S. Patent Application 17/159,449, 2021.

AWARDS AND GRANTS

- | | |
|--|------|
| • Kelley Grant (for “ <i>Human Capital Acquisition in Response to Data Breaches</i> ”) | 2023 |
| • Google-Stanford HAI Academic Compute Grant (for ‘ <i>Work2Vec</i> ’) | 2021 |
| • Wharton Dean’s Research Fund Grant (with D. Rock) | 2021 |
| • Google Academic Cloud Grant (for ‘ <i>Work2Vec</i> ’ with S. Bana, E. Brynjolfsson, and D. Rock) | 2020 |
| • Kaufman Teaching Certificate Program | 2019 |
| • MIT-IBM Watson AI Lab Grant | 2018 |

RESEARCH AFFILIATIONS

- | | |
|---|----------------|
| • Stanford Digital Economy Lab (S-DEL) – Graduate Research Affiliate | 2020 – Present |
| • U.S. Census Special Sworn Status (SSS) | 2018 – Present |
| • Association for Information Systems (AIS) | 2016 – Present |
| • LinkedIn – Economic Graph Challenge Affiliate Researcher | 2016 – 2022 |
| • MIT Initiative on the Digital Economy (MIT IDE) – Graduate Research Affiliate | 2015 – Present |

CONFERENCE PRESENTATIONS

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| • <i>IC2S2</i> , Paper Presentation, Copenhagen. | July 2023 |
| • <i>ASSA</i> , Paper Presentation, Virtual. | January 2022 |
| • <i>CIST</i> , Paper Presentation, Los Angeles. | October 2021 |
| • <i>Academy of Management (AOM)</i> , Paper Presentations, Virtual. | August 2021 |
| • <i>Munich Summer Institute (MSI)</i> , Paper Presentation, Virtual. | June 2021 |
| • <i>IC2S2</i> , Paper Presentation, Virtual. | July 2020 |
| • <i>WISE</i> , Paper Presentation, Munich. | December 2019 |
| • <i>MIT IDE Annual Conference</i> , Paper Presentation, Cambridge, MA | May 2019 |

POSTER PRESENTATIONS

- *AAAI/ACM*, Poster Presentation, New York. February 2020

INVITED TALKS

- *INFORMS - Human Centered Machine Learning*, Phoenix, AZ. October 2023
- *Utrecht University School of Economics Research Seminar*, Netherlands. June 2023
- *MIT-IDE Accenture Day*, Cambridge, MA. April 2023
- *MIT Sloan Doctoral Research Forum*, Cambridge, MA. May 2022
- *HAI – Google Research Token Update*, Virtual. April 2022
- *Annual Workshop, Stanford Digital Economy Lab*, Stanford, CA. November 2021
- *Understanding the Covid Economy: The Impact on Firms*, UNSW CAER, Virtual. October 2021
- *MIT IDE Digital Economy Seminar*, Virtual. April 2021
- *CMU-Pitt Seminar on Information Technology & Economics (SITE)*, Virtual. February 2021
- *Cornell Innovation, Entrepreneurship, and Technology (IET) Seminar*, Virtual. November 2020
- *Disrupting the Poverty Cycle*, Economic Mobility Pathways (EmPath), Virtual. October 2020
- *MIT IDE Digital Economy Seminar*, Virtual. April 2020
- *MIT Economics Labor Lunch Seminar*, Cambridge, MA. September 2019
- *Boston University Lecznar Memorial Lecture*, Boston, MA. June 2019

WORKSHOP/SEMINAR ORGANIZATION

- **Boston College Business Analytics W. Klein Seminar**, Organizer 2023 – Present
- **Stanford Digital Economy Lab (S-DEL) Seminar**, Organizer 2021
- **MIT Initiative for Digital Economy (IDE) Seminar**, Organizer 2018 – 2020
- **Research Computing Workshop**, Instructor 2019

WORKSHOP/SEMINAR PARTICIPATION

- *AI and Society: AI's Impact on the Economy*, Stanford, CA. March 2023
- *ICIS Doctoral Consortium*, Austin. December 2021
- *AOM TIM Doctoral Consortium*, Virtual. August 2021
- *CodeChella Econometrics Workshop*, Virtual. July 2021
- *Adaptation to AI-Enabled Automation Workshop*, S-DEL, Virtual. February 2021
- *Positive AI Economic Futures Workshop*, S-DEL, Virtual. December 2020
- *AOM AI Professional Development Workshop 2019*, Boston. August 2019
- *NBER Digitization Tutorial*, Stanford. March 2019
- *NBER Workshop on Economics of Artificial Intelligence*, Toronto. September 2018

SERVICE

- AI and Innovation, Session Chair & Discussant, *WISE*, Copenhagen, Denmark 2022
- Program Committee Member, *CIST* 2022, 2023
- Program Committee Member, *IC2S2* 2022 – Present
- AI and Algorithmic Bias, Session Chair, *WISE*, Austin, TX 2021
- Paper Discussant, *WISE*, San Francisco, CA 2018
- Invited Reviewer for
 - *Strategic Management Journal* 2023 – Present
 - *MIS Quarterly* 2020 – Present
 - *Management Science* 2020 – Present
 - *Information Systems Research* 2022 – Present
 - *Conference on Information Systems and Technology (CIST)* 2020
 - *MIT Sloan Sports Analytics Conference* 2018 – 2021
 - *International Conference on Information Systems (ICIS)* 2018 – Present
 - *International Conference on Computational Social Sciences (IC2S2)* 2022 – Present

PRIOR WORK EXPERIENCE

LinkedIn – Economic Graph Research (EGR) Group, San Francisco/Sunnyvale, Data Science Intern
June 2018 – September 2018

Microsoft Research New England, Cambridge, Research Assistant
May 2014 – June 2016

Cornerstone Research, Boston, Analyst
June 2013 – May 2014

Nephrology/Dialysis Station – University of Greifswald, Greifswald, Civil Servant
August 2008 – April 2009

SKILLS

- **Programming Languages:** R, Python, SQL (BigQuery), Spark
- **Software/Platforms:** Google Cloud, AWS, Git, Microsoft Office, LaTeX, ArcGIS, Gephi, Vim
- **Languages:** German (native), English (fluent), French (advanced, Certificat C1), Chinese (Beginner)
- **Sprinting:** [2008 200m German Men's National Championships \(5th Place\)](#), 2007 400m German Junior National Championships (2nd Place)
- **Hobbies:** Guitar, Squash, Running, Crafting, Vintage Ads, Webscraping