Mary Sanford

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Education

University of Oxford, St Cross College, Oxford, UK

- PhD candidate, Social Data Science, Oxford Internet Institute   **Oct 2019-2023**
  - Supervisors**:** Prof Renaud Lambiotte & Prof Balazs Vedres
- Master of Science, Social Science of the Internet, Oxford Internet Institute, *Distinction*   **2017-2018**
  - Supervisor: Dr Taha Yasseri

University of Pennsylvania, College of Arts and Sciences, Philadelphia, PA, USA   **2013-2017**

- Bachelor of Arts, Cognitive Science - Computation and Cognition
  - GPA: 3.91/4.00, *summa cum laude*, Benjamin Franklin Scholar

Work Experience

Research

Research Assistant, Oxford Martin School, Oxford, UK   **Sept 2019-Sept 2020**

- Collected, analysed, & modeled Twitter discourse around the Aug 2020 IPCC report on climate change & land use

Research Coordinator, Organization for Identity and Cultural Development   **Jan-Jun 2018**

- Lead technologist for project focused on mapping & visualising identity networks in conflict zones

Research Assistant, University of Pennsylvania, German Studies Department   **Jan-May 2017**

- Edited manuscripts for papers and book chapters for various professors within the department.

Research Assistant, Security and Privacy Lab of Dr. Klaus Wehrle, RWTH Aachen University   **May-Aug 2016**

- Wrote all code and tests to develop a software tool in Python to quantify the security of email routing against surveillance of cloud service providers

Non-Academic Positions

Data Science Intern, Organisation for Economic Co-operation and Development, Paris, France   **May-Nov 2021**

- Conducted research on a corpus of industrial sustainability reports using natural language processing and statistics to assess alignment of these reports with the UN's Sustainable Development Goals

Product Manager, Mesaic Technology GmbH, Hamburg, Germany   **Aug 2018-Jul 2019**

- Developed & executed the company's artificial intelligence & data management strategies based on data analysis & qualitative research

Research Intern, Lustick Consulting, Ardmore, PA   **May-Aug 2015**

- Built & validated agent-based network models of Iraq & Syria using NetLogo & R as a terrorism forecasting tool
- Developed a method of operationalizing human behaviors and cognition related to extremism in a computational model

Research Intern, Signature Family Wealth Advisors, Norfolk, VA   **May-Aug 2014**

- Researched improvements of existing models for predicting long-term earnings growth by applying concepts from psychology to how fund managers determine dividend payout ratios
- Researched correlations between stock and brand performance to optimize investment strategies

Teaching

Mentor, GEC Academy   **Jun 2020-Present**
- Consumer Data Analytics, Prof David Schweidel (Emory University)
- Brand Strategy: Visual Identity for Strategic Advantage, Prof Kenna Kay (Columbia University)

Teaching Assistant, Oxford Internet Institute   **Sept 2019-Dec 2019**
- Introduction to Python Programming, Dr Chico Camargo

Teaching Assistant, University of Pennsylvania   **Aug 2015-May 2017**
- The Wharton School of Business, Operations, Information and Decisions Department
  - Advanced Decision Systems, Dr Steven Kimbrough
- School of Engineering and Applied Sciences, Department of Computer and Information Science
  - Introduction to Cognitive Science, Dr. Lyle Ungar & David Brainard
  - Networked Systems and Social Engineering, Dr Michael Kearns

Tutor, **University of Pennsylvania**   **2014-2017**
- Tutored students in calculus, economics, and French

Publications
- [Sanford, M., Painter, J., Yasseri, T. et al. Controversy around climate change reports: a case study of Twitter responses to the 2019 IPCC report on land. Climatic Change 167, 59 (2021).](#)
- [Sanford, Mary; Hohlfeld, Oliver and Henze, Martin. (2017). Veiled in Clouds? Assessing the Prevalence of Cloud Computing in the Email Landscape. 2017 IEEE/IFIP TMA Network Traffic Measurement and Analysis Conference.](#)

Conferences
- Oral presentation at IC2S2 2021.
- Poster presentation at NetSci 2021.
- Invited panelist. Annual Livestock, Environment and People Conference, 2020.
- Abstract presented at NetSci 2020.
- IEEE/IFIP TMA Network Traffic Measurement and Analysis Conference, 2017.

Research Grants
- 2019-2022 Grand Union DTP ESRC Advanced Quantitative Methods Studentship
- 2017 MAKI Female Mentoring and Network Programme Grant
- 2016 Rosemary D. Mazzatenta Award
- 2016 Undergraduate Research Opportunities Program Scholarship, Dr. Carl-Arthur Pastor Foundation

Extracurricular Activities
- University of Oxford: Wolfson College Boat Club (Captain - Women's 2019, Men's 2020), Linkages Volunteering Group
- University of Pennsylvania: Benjamin Franklin Scholars (President), Student Committee on Undergraduate Education (Project leader)

Additional Information
- *Technical Skills:* data science, natural language processing, network science, and deep learning in Python; statistics in R; big data in SQL; network visualisation in Gephi
- *Languages:* French (advanced), German (advanced), Italian (intermediate), Arabic (beginner)