Daniel Hickey

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Education

UC Berkeley — Berkeley, CA, USA
Ph.D. in Information Science — *Aug. 2024 – Present*

Oregon State University — Corvallis, OR, USA
Honors Bachelor of Science in Biological Data Sciences, Minor in Computer Science — *Sep. 2020 – June 2024*
GPA: 4.0/4.0

Relevant Coursework: NLP with Deep Learning, Social Network Analysis, Cultural Analytics, Machine Learning and Data Mining, Methods of Data Analysis, Survey of Social Media

Peer-reviewed Publications

1. **Hickey, D.**, Fessler, D.M.T., Schmitz, M. & Burghardt, K. The Peripatetic Hater: Predicting Movement Among Online Hate Communities. *Accepted to ICWSM, in press* (2024).
2. **Hickey, D.**, Fessler, D.M.T., Lerman, K. & Burghardt, K. X Under Musk's Leadership: Substantial Hate and No Reduction in Inauthentic Activity. *Accepted to PLOS ONE, in press* (2024).
3. Schmitz, M., Murić, G., **Hickey, D.,** & Burghardt, K. Do Users Adopt Extremist Beliefs from Exposure to Hateful Subreddits? *Social Network Analysis and Mining* (2024).
4. **Hickey, D.**, Schmitz, M., Fessler, D.M.T, Smaldino, P., Murić, G., & Burghardt, K. Auditing Elon Musk's Impact on Hate Speech and Bots. *ICWSM*, (2023).
    - **Featured in *CNBC*, the *LA Times*, and *WIRED*.**

Publications In Submission/Preparation

1. **Hickey, D.**, Schmitz, M., Fessler, D.M.T., Smaldino, P., Lerman, K., Murić, G., & Burghardt, K. Hostile Counterspeech Reduces Engagement in Online Hate Communities. *In Preparation* (2024).

Conference Presentations

- **Bioinformatic Identification and Analysis of miRNAs Associated with Maize Male Gametophyte Development.** Presented at the 64th annual Maize Genetics Meeting (April 2022) and the American Society of Plant Biologists Western Section Annual Meeting (April 2023).
- **Effects of Laser Perforation on the Quality of Freeze-dried Blueberries and the Energy Efficiency of the Freeze-drying Process**. Presented at the Institute of Food Technologists' Annual Meeting and Expo (July 2020).

Experience

Undergraduate Research Intern — April 2022 – Present
University of Southern California, Information Sciences Institute — *Marina Del Rey, CA, USA*

- Worked with mentors Dr. Keith Burghardt and Dr. Goran Murić in a U.S. National Science Foundation Research Experience for Undergraduates.
- Studied the dynamics of online hate, analyzing communities on Reddit and hate speech on Twitter/X. Made several discoveries related to how users of platforms can become more extreme and how hate can be combated on social media.
- Published multiple papers as the first author, with several more first-author papers in submission.

Undergraduate Research Assistant — June 2021 – Present
Oregon State University — *Corvallis, OR, USA*

- Conducted plant biology research with Dr. John Fowler as part of a U.S. Department of Agriculture summer program.

- Investigated large biological datasets to determine the role miRNAs play during maize pollen development.
- Discovered mechanisms of gene expression regulation thought to be present across widely divergent species of plants.

Research Intern June 2019 – October 2019

Food Innovation Center *Portland, OR, USA*

- Participated in a summer internship studying engineering for food science with Dr. Qingyue Ling.
- Evaluated the impact of laser perforation on the freeze-drying process of blueberries.
- Discovered that the use of lasers can greatly accelerate the process of freeze-drying blueberries in an energy-efficient manner, which can reduce production costs.
- Presented results at an international conference of food technology.

Awards

Highly Commended Entrant – Global Undergraduate Awards. Recognized for my paper: "Pulling Back the Curtain on Scientific Racism in Modern Academic Publishing." *In the top 10% of submissions*
Senior Grant Recipient – MOAA Educational Assistance. *One of the top 3 applicants, receiving a 12,000 USD scholarship.*
NSF Graduate Research Fellowship – Honorable Mention
Oregon State University Drucilla Shepard-Smith Award *Awarded to students who have maintained a 4.0 GPA.*

Skills

Methods: Natural Language Processing, Deep Learning, Social Network Analysis, Causal Inference
Programming Languages: Python, R, JavaScript, HTML/CSS, C++
Python Packages: Pytorch, Pandas, Numpy, Matplotlib, Seaborn, Sci-kit Learn