Amy A. Winecoff

Princeton University, Center for Information Technology Policy (CITP)
aw0934@princeton.edu
https://amywinecoff.github.io/

PURPOSE

My research focuses on human-algorithm interactions, taking into consideration how humans both shape and react to algorithms. Using qualitative, quantitative, and simulation techniques, I study how people develop algorithmic systems and how these systems adapt over time.

ACADEMIC BACKGROUND

Ph.D. Psychology & Neuroscience 2014
Duke University, Durham, NC

- Dissertation title: Domain-general affect: Neural mechanisms and clinical implications

B.A. Visual Arts Applications 2007
North Carolina State University, Raleigh, North Carolina

- Summa Cum Laude, Phi Beta Kappa

EMPLOYMENT HISTORY

DataX Research Fellow October 2020 - Present
Princeton University, Center for Information Technology Policy, Princeton, NJ

- Lead a qualitative study on how professionals working at blockchain organizations conceptualize the ideological motivations for decentralization.
- Conducted a qualitative interview study on how artificial intelligence startups adapt to external pressures such as those from investors and regulators.
- Contributed to an open-source toolkit for developing agent-based simulations of recommender systems. Proposed an empirical framework for conducting simulation experiments.
- Quantitatively evaluated the latent structure of political discourse on Reddit and how this discourse changes under different reaction mechanisms (e.g., up-vote, down-vote)
- Taught workshops on machine learning for humanities scholars and STEM researchers.
- Advised student entrepreneurs in Princeton's eLab Accelerator. Led workshops on incorporating ethical values into development.

Senior Data Scientist January 2020 - September 2020
Chewy, Boston, MA

- Developed and implemented a system for recommending products based on users' reported pet characteristics and pet health

Senior Data Scientist November 2017 - January 2020
True Fit, Boston, MA

- Researched, developed, and evaluated fashion style recommender and search systems. Designed and conducted qualitative and quantitative user research.
- Led a team of three data scientists through the launch of a fashion style recommendation product. Collaborated cross-functionally with product managers, engineers, and customer success managers to facilitate roll out.

Research Scientist August 2016 - November 2017
Charles River Analytics, Cambridge, MA

- Collaborated with external academic researchers and internal engineers to prototype technologies for government agencies (e.g., US Air Force, Department of Transportation).

Assistant Professor of Psychology July 2014 - July 2016
Bard College, Annandale-on-Hudson, NY

- Lead an undergraduate research lab. Published empirical research and review chapters on human psychology and psychopathology. Taught 10 courses. Supervised 10 senior thesis projects.

CONFERENCE PROCEEDINGS

See also my google scholar page.

3. Papakyriakopoulos, O., Engelmann, S., & **Winecoff, A.**. (2023, forthcoming). Upvotes? Downvotes? No Votes? Understanding the relationship between reaction mechanisms and political discourse on Reddit. *In Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems.*
2. **Winecoff, A.**, & Watkins, E. A. (2022). Artificial concepts of artificial intelligence: Institutional compliance and resistance in AI startups. In *Proceedings of the 2022 AAAI/ACM Conference on AI, Ethics, and Society.*
1. **Winecoff, A.**, Brasoveanu, F., Casavant, B., Washabaugh, P., & Graham, M. (2019). Users in the loop: A psychologically-informed approach to similar item retrieval. In *Proceedings of the 13th ACM Conference on Recommender Systems* (pp. 52-59).

WORKSHOP PAPERS & PRESENTATIONS

4. Lenhard, J., & **Winecoff, A.** What web3 calls thinking - from democratisation to inequality in blockchain ideologies. Presentation at *Anthropology, AI, and the Future of Human Society.*
3. **Winecoff, A.**, Sun, M., Lucherini, E., & Narayanan, A. (2021). Simulation as experiment: An empirical critique of simulation research on recommender systems. Paper presented at the *SimuRec Workshop at the 15th ACM Conference on Recommender Systems.*
2. Papakyriakopoulos, O., Watkins, E. A., **Winecoff, A.**, Jaźwińska, K., & Chattopadhyay, T. (2021). Qualitative analysis for human-centered AI. Paper presented at the *Human-Centered AI Workshop at the Conference on Neural Information Processing Systems (NeurIPS)*
1. Sherman, J., Shukla, C., Textor, R., Zhang, S., & **Winecoff, A.** (2019). Assessing fashion recommendations: A multifaceted offline evaluation approach. Paper presented at the *FashionXRecSys Workshop at the 13th ACM Conference on Recommender Systems*

PREPRINTS

2. Lucherini, E., Sun, M., **Winecoff, A.**, & Narayanan, A. (2021). T-RECS: A simulation tool to study the societal impact of recommender systems. arXiv preprint arXiv:2107.08959.
1. Khaziev, R., Casavant, B., Washabaugh, P., **Winecoff, A.**, & Graham, M. (2019). Recommendation or discrimination?: Quantifying distribution parity in information retrieval systems. arXiv preprint arXiv:1909.06429.

JOURNAL ARTICLES

7. Sweitzer, M. M., Watson, K. K., Erwin, S. R., **Winecoff, A.**, Datta, N., Huettel, S., Platt, M. & Zucker, N. L. (2018). Neurobiology of social reward valuation in adults with a history of anorexia nervosa. *PloS One*, 13(12), e0205085.
6. King, A., Kaighobadi, F., & **Winecoff, A.** (2016). Brief report: A health belief model approach to men's assessment of a novel long-acting contraceptive. *Cogent Medicine*, 3(1), 1250320.
5. **Winecoff, A.**, Ngo, L., Moskovich, A., Merwin, R., & Zucker, N. (2015). The functional significance of shyness in anorexia nervosa. *European Eating Disorders Review*, 23(4), 327-332.
4. **Winecoff, A.**, Clithero, J. A., Carter, R. M., Bergman, S. R., Wang, L., & Huettel, S. A. (2013). Ventromedial prefrontal cortex encodes emotional value. *Journal of Neuroscience*, 33(27), 11032-11039.
3. **Winecoff, A.**, LaBar, K. S., Madden, D. J., Cabeza, R., & Huettel, S. A. (2011). Cognitive and neural contributors to emotion regulation in aging, *Social Cognitive and Affective Neuroscience*. 6(2), 165-176.
2. Chang, S. W., **Winecoff, A.**, & Platt, M. L. (2011). Vicarious reinforcement in rhesus macaques (Macaca mulatta). *Frontiers in Neuroscience*, 5, 27.
1. O'Dhaniel, A., Detwiler, J. M., **Winecoff, A.**, Dobbins, I., & Huettel, S. A. (2011). Infrequent, task-irrelevant monetary gains and losses engage dorsolateral and ventrolateral prefrontal cortex. *Brain Research*, 1395, 53-61.

BOOK CHAPTERS

2. **Winecoff, A.** , & Huettel, S. A. (2017). Cognitive control and neuroeconomics. In Egner, T. (Ed.) *The Wiley Handbook of Cognitive Control*, (pp. 408-421).
1. Jacques, P. L. S., **Winecoff, A.**, & Cabeza, R. (2013). Emotion and aging. In Armony, J., & Vuilleumier, P. (Eds.), *The Cambridge Handbook of Human Affective Neuroscience*, (pp. 635-661).