Hunter Priniski

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Executive Summary

Leverage 8 years experience in large-scale online experimentation, computational cognitive psychology, and data science of internet behavior to develop experimental, AI, and measurement frameworks revealing how people respond to narrative elements in digital content and to promote stories that inspire.

Experience

UCLA | Postdoctoral Fellow | Sept. 2024-present

- First authored manuscript (under review) on how network structure and narrative complexity shape group outcomes in large-scale social network experiments (N=1,040, interactions=40,800). Leveraged computational modeling and a novel LLM-based language analysis to demonstrate that narrative complexity influences optimal exploration strategies for aligning behaviors with neighbors, and that hashtag alignment shifts participants' written descriptions of events.
- Developed an innovative framework for the Gemini AI model to classify narrative content in digital video media through engineered "Who/What/When/Where/Why" prompts. Applied this framework to TikTok data, analyzing narrative shifts in response to real-world events in the Philippines, offering insights into how narrative structure impacts audience engagement and content dynamics.

UCLA | Graduate Student Researcher | 2019-2024

- Collaborated within an interdisciplinary team of computer engineers, statisticians, psychologists, and industry stakeholders to produce high-impact research which I communicated at international policy, cognitive, and computer science conferences, in academic journals, and shared through open-sourcing software in behavioral experimentation and AI (see Open-Source Contributions, below).
- Developed and validated novel experimentation and measurement frameworks to analyze group-based narrative dynamics and user engagement with digital media; the first of its kind for experimentally studying naturalistic online media and narrative interactions.
- Conducted A/B testing on novel cross-linguistic measures administered to local populations in Africa and South America to validate language and event predictions from NLP-based forecasting pipelines.
- Built a novel LLM-based pipeline to model beliefs from natural language in digital media (e.g., social media, news stories), applied to (1) construct belief systems about the Covid-19 vaccine from tweets and (2) measure narrative shifts in experimental social networks (see below for publications).
- Established API access, collected, and developed processing pipelines for millions of posts from Twitter (2021-2022) and TikTok (2023-) for large-scale narrative and social network analysis.

Arizona Department of Environmental Quality | Business Intelligence Intern | 2016-2017

- Worked with ADEQ's business intelligence, geological science, and leadership teams to create a data dashboard using SQL and Tableau, gathering large, multi-source datasets to communicate agency-wide trends and provide accessible insights that aligned department objectives.

Selected Research and Open-Source Contributions

Communicated research in 16 high-impact conference and journal articles across cognitive science, computer science, and interdisciplinary venues (12 first author; h-index: 8; 214 citations) and presented findings in 8 talks at international conferences (ACL, CogSci), universities (USC, Edinburgh, UCL), and to industry leaders (DeepMind). Selected publications and associated software:

- Priniski, J., Verma, I., & Morstatter F. (2023). Pipeline for modeling casual belief from natural language. ACL (Vol 3). [No-code public interface for AI pipeline at causal-claims.isi.edu.]
- Priniski, J. H., Linford, B., Krishna, S., Morstatter, F., Brantingham, J., & Lu, H. (2024). Online network topology shapes personal narratives and hashtag generation. CogSci. [GitHub Repo for running and analyzing network experiments.]

Education

Cognitive Science (Psychology), PhD, UCLA (2024), *Advisor: Keith Holyoak*, Dissertation**:** *Belief dynamics in online social networks* (Kate Gordon Moore Award)

Mathematics, BS, Arizona State University (2017), *summa cum laude*

Technical Skills

- **Python** (9 yrs): PyTorch, HuggingFace, OpenAI API,OTree, pandas, spacy, psychopy
- **R** (9 yrs): tidyverse, brms (6 yrs)
- **Other Languages**: SQL, JavaScript, MATLAB (high proficiency)
- **Statistical Methods**: LLMs, transformers, Natural Language Processing, network science, Bayesian generative modeling, computational cognitive modeling, online behavior analysis, A/B testing