Suhaib Abdurahman

🎓 Scholar | 🔗 LinkedIn | 🌐 Website | ✉ Email

SUMMARY

Behavioral scientist with a strong engineering background developing psychologically and socially grounded methods to advance AI systems and agents.

RESEARCH INTERESTS

Social and Behavioral AI, NLP, LLMs, Agentic and Multi-Agent Systems, Human-Centered AI Evaluation

EDUCATION

PhD Social Psychology, USC (expected 2026)
Thesis: **Generative Agents for Social Psychology**

M.S. Energy and Process Engineering, TU Berlin (2021)
Focus: Process Optimization and Control (related courses in ML/NLP, statistical modeling)

B.S. Energy and Process Engineering, TU Berlin (2018)

SELECTED SKILLS

Programming: Python, R, SQL
ML/NLP: PyTorch, Keras, transformers, Huggingface, pandas, numpy, dask
Simulation: Agentic AI (LangChain, CrewAI, custom), agent-based modeling (Mesa, custom)
Statistical Analysis: Hierarchical regression & classification, clustering, time-series, Bayesian
Behavioral Science: Experiments & hypothesis testing, social cognition & decision-making frameworks

RELEVANT EXPERIENCE

Graduate Researcher, Morality & Language Lab, USC　　　　　　　　　2021–Present
- Developed multi-agent simulations to model group dynamics using persona-conditioned LLM agents.
- Ran large-scale in-silico experiments to evaluate agent realism and behavioral dynamics.
- Uncovered causal pathways of agent behavior from agent trajectories.
- Steered agent behavior using representations of psychological constructs (e.g., traits, values)
- Optimized simulation frameworks with quantized LLMs for scalable, low-resource experimentation.

LLM & GenAI Applied Science Intern, Amazon　　　　　　　　　　　　05-08/2025
- Integrated social reasoning mechanisms into AI agents, improving coordination and reliability.
- Designed evaluation pipelines to quantify performance improvements over strong baselines.

Visiting Fellow, Kellogg School of Management, *PI: Nour Kteily*　　　05-07/2024
- Extended multi-agent LLM frameworks to study group conflict and moral reasoning.
- Extracted psychological features from 30M+ social media posts using transformer-based models.
- Integrated simulation and behavioral data to identify mechanisms underlying negative social behaviors.

Analyst, MicroEnergy International GmbH　　　　　　　　　　　　　2017-2019
- Delivered data-driven analyses and strategic recommendations to senior management.
- Automated financial reporting pipeline in Python, reducing manual workload and increasing accuracy.

In Preparation & Under Review

Abdurahman, **Suhaib**, Farzan Karimi-Malekabadi, Chenxiao Yu, Nour S Kteily, et al. (2025). "Realistic threat perception drives intergroup conflict: A causal, dynamic analysis using generative-agent simulations". In: *arXiv:2512.17066*.

Abdurahman, **Suhaib**, Etsuko Ishii, Katerina Margatina, Divya Bhargavi, et al. (2026). "Explicit Trait Inference for Multi-Agent Coordination." In: *Committed to ACL*.

Karimi-Malekabadi, Farzan, **Suhaib Abdurahman**, Zhivar Sourati, Jackson Trager, et al. (2026). "Theory Trace Card: Theory-Driven Socio-Cognitive Evaluation of LLMs". In: *arXiv preprint arXiv:2601.01878*.

Yu, Chenxiao, Bowen Yi, Farzan Karimi-Malekabadi, **Suhaib Abdurahman**, et al. (2026). "Tracing Moral Foundations in Large Language Models". In: *arXiv preprint arXiv:2601.05437*.

Selected Publications

Vu, Huy, **Suhaib Abdurahman**, Sudeep Bhatia, and Lyle Ungar (2020). "Predicting responses to psychological questionnaires from participants' social media posts and question text embeddings". In: *Findings of the association for computational linguistics: Emnlp 2020*, pp. 1512–1524.

Lindquist, Emma G, **Suhaib Abdurahman**, Diana W Woodward, and Amy E West (2023). "Sharing is in fact about caring: Care concerns feature prominently in subreddits devoted to self-injurious thoughts and behaviors". In: *Computers in Human Behavior* 145, p. 107786.

Abdurahman, **Suhaib**, Mohammad Atari, Farzan Karimi-Malekabadi, Mona J Xue, et al. (2024). "Perils and opportunities in using large language models in psychological research". In: *PNAS nexus* 3.7, pgae245.

Abdurahman, **Suhaib**, Huy Vu, Wanling Zou, Lyle Ungar, et al. (2024). "A deep learning approach to personality assessment: Generalizing across items and expanding the reach of survey-based research." In: *Journal of Personality and Social Psychology* 126.2, p. 312.

Abdurahman, **Suhaib**, Nils K Reimer, Preni Golazizian, Elisa Baek, et al. (2025). "Targeting audiences' moral values shapes misinformation sharing." In: *Journal of Experimental Psychology: General*.

Abdurahman, **Suhaib**, Alireza Salkhordeh Ziabari, Alexander K Moore, Daniel M Bartels, et al. (2025). "A primer for evaluating large language models in social-science research". In: *Advances in Methods and Practices in Psychological Science* 8.2, p. 25152459251325174.

Fellowships & Grants

USC Doctoral Research Grant	01/2026
ERP Fellowship	03/2022
Ernst-Reuter Fellowship	06/2019
Avicenna Fellowship	09/2015, 09/2018