

# Hussam Habib

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## Research Interests

Computational Social Science; Online User Behavior; Algorithm Audits; Online Personalization.

## Work Experience

<b>New York University</b> Research Associate, with Prof. Rachel Greenstadt	2024-Present
<b>University of Iowa</b> Research Associate, with Prof. Rishab Nithyanand	2019-2024
<b>Lahore University of Management Sciences</b> Research Assistant, with Prof. Fareed Zaffar	2018-2019

## Higher Education

<b>Ph.D. Computer Science</b> , University of Iowa Advisor: Rishab Nithyanand Thesis: How do social media platforms influence user behavior?	2019-Present
<b>B.S. Computer Science</b> , National University of Computer & Emerging Sciences	2014-2018

## Honors & Awards

<b>Graduate College Post-Comprehensive Research Fellowship</b> , University of Iowa	2022
<b>Dare to Discover Feature</b> , University of Iowa	2022
<b>Dean's Honor List</b> , National University of Computer & Emerging Sciences	2018 2017
<b>Travel Grants</b> , PETS'23	2023

## Articles Under Review

- [1] H. Habib, R. Stoldt, R. Maragh-Lloyd, B. Ekdale, and R. Nithyanand, Uncovering the Interaction Equation: Quantifying the Effect of User Interactions on Social Media Homepage Recommendations. Submitted: **ACM Conference on Fairness, Accountability, and Transparency (FAccT 2025)**. <https://arxiv.org/pdf/2407.07227>
- [2] H. Habib and R. Nithyanand, YouTube Recommendations Reinforce Negative Emotions: Auditing Algorithmic Bias with Emotionally Agentic Sock Puppets. Submitted: **ACM Conference on Fairness, Accountability, and Transparency (FAccT 2025)**. <https://arxiv.org/pdf/2501.15048>
- [3] S. Aldrich, H. Habib and U. Iqbal. A Framework for Benchmarking Personalization in AI Agents. Submitted: **Privacy Enhancing Technologies (PETS 2026)**.
- [4] H. Habib and R. Greenstadt, For You (and Everyone Else): Privacy Implications of Discovered Unauthorized Access to TikTok's FYP and External Shares. Submitted: **ACM Conference on Computer and Communications Security (CCS 2026)**.

## Published Articles

- [5] H. Habib, R. Stoldt, R. Maragh-Lloyd, B. Ekdale, A. High, A. Peterson, K. Biddle, J. Ssozi, and R. Nithyanand, Algorithmic amplification of biases on Google Search: How Partisan Audiences on Google Search Induce an Abortion-Related Filter Bubble Effect. Submitted: **ACM SIGCHI Conference on Computer Supported Cooperative Work (CSCW 2025)**. <https://arxiv.org/pdf/2401.09044>
- [6] R. Roongta, J. Jose, H. Habib, R. Greenstadt, Sheep's clothing, wolfish impact: Automated detection and evaluation of problematic 'allowed' advertisements. In: **Privacy Enhancing Technologies (PETS 2026)**.
- [7] H. Habib, P. Srinivasan, and R. Nithyanand, Making a Radical Misogynist: How Online Social Engagement with the Manosphere Influences Traits of Radicalization. In: **ACM SIGCHI Conference on Computer Supported Cooperative Work (CSCW 2022)**. <https://doi.org/10.1145/3555551>
- [8] H. Habib, M. B. Musa, M. F. Zaffar, and R. Nithyanand, Are Proactive Interventions for Reddit Communities Feasible? In: **AAAI Conference on Web and Social Media (ICWSM 2022)**. <https://ojs.aaai.org/index.php/ICWSM/article/view/19290>
- [9] H. Habib and R. Nithyanand, Exploring the Magnitude and Effects of Media Influence on Reddit Moderation. In: **AAAI Conference on Web and Social Media (ICWSM 2022)**. <https://ojs.aaai.org/index.php/ICWSM/article/view/19291>
- [10] H. Habib and R. Nithyanand, The Morbid Realities of Social Media: An Investigation into the Narratives Shared by the Deceased Victims of COVID-19. In: **AAAI Conference on Web and Social Media (ICWSM 2023)**. <https://doi.org/10.1609/icwsml.v17i1.22147>
- [11] R. Stoldt, A. High, A. Peterson, K. Biddle, R. Maragh-Lloyd, R. Nithyanand, B. Ekdale, T. Havens, H. Habib, J. Thiede, Extended abstract: Relationships Among Vaccination Attitudes, Social Media Use, and Activist vs. Radical Behavior. In: **72nd Annual International Communication Association Conference (ICA 2022)**.

## Open-Source Contributions

**Warning Behavior Analysis Toolkit** • [github.com/hussamh10/warning-behavior-analysis-toolkit](https://github.com/hussamh10/warning-behavior-analysis-toolkit)

A computational framework using social science theories to measure warning behaviors indicative of radicalization in online platforms.

**Online Community Health Monitor** • [github.com/hussamh10/online-community-monitor](https://github.com/hussamh10/online-community-monitor)

Active monitoring of subreddits to flag online communities—using interpretable machine learning—as they adopt and exhibit problematic behavior.

**Emotionally-Agentic YouTube Sock Puppets** • [github.com/hussamh10/youtube-sockpuppets](https://github.com/hussamh10/youtube-sockpuppets)

YouTube Sock Puppets powered by LLMs consuming YouTube videos and selecting videos replicating psychological rule-based system.

**Characterizing Platform Behavior** • [github.com/hussamh10/platform-behavior](https://github.com/hussamh10/platform-behavior)

A platform audit system designed to measure, replicate, and taxonomize platform behavior. Currently supporting Facebook, Twitter, Reddit, and YouTube.

## Teaching

<b>Machine Learning Workshop</b> , Research Experiences for Undergraduates (REU)	Summer 2023
<b>CS:2820 • Object-Oriented Software</b> , University of Iowa, Teaching Assistant	Fall 2020
<b>CS:2520 • Human-Computer Interaction</b> , University of Iowa, Teaching Assistant	Spring 2020
<b>CS:2230 • Data Structures</b> , University of Iowa, Teaching Assistant	Fall 2019

## Invited Talks

<b>Social media platforms and their influence user behavior.</b> Washington University in St. Louis	Fall 2024
<b>Social media platforms and their influence user behavior.</b> Denison University	Fall 2024
<b>The radicalization pathways towards misogyny through the Manosphere.</b> Nothing to hide (podcast)	Spring 2024
<b>Does Google serve different results to users with opposing opinions?</b> University of Wisconsin–Madison	Fall 2024
<b>Social media platforms and their influence user behavior.</b> University of Illinois Urbana-Champaign	Fall 2023
<b>Social media platforms and their influence user behavior.</b> University of Iowa	Fall 2023
<b>Investigating Proactive Strategies for Online Community Moderation.</b> Lahore University of Management Sciences	Fall 2020

## Service

**Reviewer**

AEJMC'23, ICWSM'24, '25, '26, CSCW'24, IEEE'24

## Research Mentoring

<b>Ritik Roongta</b> , Graduate Student, NYU	2024
<b>Stuart Aldrich</b> , Graduate Student, WashU	
<b>Amol Bhagavathi</b> , Undergraduate, University of Iowa	
<b>Luke Aschenbrenner</b> , Visiting REU, Benedictine College	2023
<b>Tiziana Hernandez</b> , Visiting REU, Stonehill College	
<b>Nick Cardenas</b> , Visiting REU, Grinnell College	2022
<b>Jordan Pollard</b> , Visiting REU, St. Ambrose University	