

# HANDE BATAN

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## SUMMARY

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Mixed-methods researcher with 3+ years of experience uncovering actionable insights at the intersection of data, behavior, and design. Skilled in both qualitative and quantitative methods, interviews, surveys, thematic analysis, and statistical modeling, with a strong track record of turning complex datasets into clear and impactful stories.

## SKILLS

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**Expertise:** Descriptive Analysis, Observations, Visualizations, Interviews, Surveys, Content and Data Analysis

**Programming:** Python, SQL, R, Microsoft Excel (VBA), Alteryx

**Tools:** Figma, Miro, Tableau, Canva, Qualtrics

**Professional Certificates:** [Google UX Design](#), [AI for Designers](#)

## WORK EXPERIENCE

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### Instructor

May 2024-June 2024

*Dept. of Information Science, University of Colorado Boulder*

*Boulder, CO*

- Designed and taught a full-length introductory Python course, including custom project-based assignments that enabled students to apply core programming concepts in real-world scenarios.
- Delivered daily lectures, managed all instructional materials, and maintained course operations across platforms (e.g., Canvas) to ensure a smooth, engaging, and structured learning experience.
- Created and facilitated original, course-long projects that aligned with weekly content, promoting hands-on learning, critical thinking, and cumulative skill development in Python.

### Researcher

August 2021-May 2024

*Dept. of Information Science, University of Colorado Boulder*

*Boulder, CO*

#### Medical Racism in COVID-19 Vaccine Information Disorder Narratives

- Led qualitative coding and thematic analysis of over 3,000 vaccine-related tweets referencing the Tuskegee Syphilis Study, uncovering 12 distinct narrative voices across political, racial, and medical trust dimensions.
- Employed inductive coding, inter-rater reliability testing (Cohen's Kappa: 0.92–1.0), and network graph analysis to map how disinformation, medical racism, and historical trauma co-create a “polyvocal” online discourse.
- Collected and cleaned large-scale Twitter data using the Twitter API, applied keyword filtering, timeline segmentation, and manual in-dept analysis for each account.
- Identified how misinformation and legitimate racial distrust intersect in online vaccine discourse, informing strategies for more culturally sensitive and targeted public health messaging.

#### Information Disorder of the COVID-19 Vaccines tied to Menstrual and Reproductive Health

- Led a multi-method study combining discourse analysis, content analysis, and timeline mapping to examine how menstrual disruption self-reports on Twitter evolved into misinformation linking COVID-19 vaccines to infertility.
- Analyzed over 1.1 million tweets using custom keyword filtering, engagement-based sampling, and discourse framing techniques to uncover how different voices and narratives converged in real time.
- Identified three waves of social convergence and ten discursive “voices” that shaped the spread of disinformation, contributing novel insights into how gaps in public health messaging create “fertile ground” for online misinformation.

### Teaching Assistant

January 2020-May 2024

*Dept. of Information Science, University of Colorado Boulder*

*Boulder, CO*

- Taught and assisted four undergraduate courses across coding, survey design, and information science; supported around 600 students over four years.
- Developed curriculum, delivered lectures, and provided mentorship; earned average course evaluations of 4.2/5 overall and 4.4/5 as an instructor.

## PROJECT EXPERIENCE

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### Sweetening the Conversation: Analyzing Public Sentiment on Artificial Sweeteners

[Paper Link](#)

- Conducted a large-scale social media data analysis (n=308K tweets) to explore public discourse around natural and artificial sweeteners and their perceived health impacts using mixed methods.
- Applied Latent Dirichlet Allocation (LDA) to identify major discussion themes related to nutrition, health risks, and consumer attitudes toward sweeteners like Stevia, sucralose, and aspartame.
- Explored temporal patterns in tweet volume and linked spikes to external events/news, uncovering how information and misinformation around food safety spread on Twitter.
- Developed and filtered a new dataset using the Twitter API, refining raw data through language filtering, deduplication, and keyword analysis focused on chronic illnesses (cancer, diabetes, Lyme disease).

### Design Recommendations for Denver Museum of Nature and Science

[Portfolio Link](#)

- Conducted in-situ visitor observations and spontaneous interviews across five museum zones to uncover navigation patterns, engagement behaviors, and spatial challenges.
- Synthesized data using affinity mapping to identify themes around accessibility, wayfinding, and emotional connection to the space, forming the foundation for targeted recommendations.
- Delivered five experience-driven recommendations, including accessibility enhancements, value-aligned exhibits, and improved analog/digital integration for diverse audiences.
- Collaborated with a multidisciplinary team, adapting plans in real time to meet project constraints while maintaining research rigor.

### UX Research: Redesigning Grocery Shopping for Young Adults

[Portfolio Link](#)

- Conducted contextual interviews and observations with young adults (18–34) during live grocery trips to uncover shopping behaviors and digital tool usage.
- Analyzed qualitative data through iterative affinity mapping and laddering to identify pain points and user needs.
- Delivered actionable short- and long-term design recommendations, including chatbot support and smart cart technology, to improve both digital and in-store experiences.

## EDUCATION

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### University of Colorado Boulder

January 2020-May 2021

M.S. in Information Science *Advisor: Dr. Leysia Palen*

Master's Project: Landscape of Twitter's Deception: Bots & Automation

### University of Colorado Boulder

August 2015-May 2019

B.S. in Business Analytics and Entrepreneurship & Strategy

Minor in Information Science

## PUBLICATIONS

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- Palen, L., Rama Subramanian, D., Diamond, L. L., **Batan H.** & Harris, T. [The Social Convergence of Information Disorder: Discovery and Analysis of the “Fertile Ground” of COVID-19 Vaccine Hesitancy](#). Computer Supported Cooperative Work (CSCW 2025), 34(1), 113-154.
- Diamond L., **Batan H.**, Anderson J., Palen, L., [The Polyvocality of Online COVID-19 Vaccine Narratives that Invoke Medical Racism](#) 2022 Proceedings of the ACM Conference on Human Factors in Computing Systems (CHI 2022) **Best Paper Honorable Mention**
- **Batan, H.**, Radpour, D., Kehlbacher, A., Klein-Seetharaman, J., & Paul, M. J. [Natural vs. artificially sweet tweets: characterizing discussions of non-nutritive sweeteners on Twitter](#). 2021 Explainable AI in Healthcare and Medicine: Building a Culture of Transparency and Accountability, 179-185.