Hande Batan

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Education

University of Colorado Boulder

Ph.D. Science in Information Science — **August 2021-May 2025 (expected)**
Advisor: Dr. Leysia Palen — GPA: 3.89

M.S. in Information Science — **January 2020-May 2021**
Advisor: Dr. Leysia Palen — GPA: 3.80

B.S in Business Administration — **August 2015-May 2019**
Double emphasis: Information Analytics and Strategy & Entrepreneurship
Minor: Information Science

Research Interests

Human-Computer Interaction, Mis/Disinformation, Public Health, Crisis Informatics, Computational Social Science.

Skills

Qualitative Research: Content Analysis, Inductive Coding, Miro
Technical: Python 3.6.4, MySQL, Microsoft Excel, Alteryx, Tableau, R, HTML
Language: Native in Turkish, Fluent in English

Papers & Posters

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)*

Batan, H., Radpour, D., Kehlbacher, A., Klein-Seetharaman, J., Paul, M.J., (2021) Natural vs. Artificially Sweet Tweets: Characterizing Discussions of Non-nutritive Sweeteners on Twitter. In: Shaban-Nejad A., Michalowski M., Buckeridge D.L. (eds) *Explainable AI in Healthcare and Medicine*. Studies in Computational Intelligence, vol 914. Springer, *Cham*. **https://doi.org/10.1007/978-3-030-53352-6_16**

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". AAAI International Workshop on Health Intelligence (W3PHIAI), New York, New York. February 2020.

Experience

University of Colorado Boulder
Research Assistant

COVID-19 Vaccine Narratives that Invoke Medical Racism **May 2021-December 2021**

- Analyzed and performed qualitative inductive thematic analysis on tweets. Ran descriptive statistical analysis on the labels and created a coloring scheme and visualizations using Python.
- Resulted in a paper entitled "The Polyvocality of Online COVID-19 Vaccine Narratives that Invoke Medical Racism" , which was accepted to the Health Intelligence workshop in CHI 2022.

Natural vs. Artificially Sweet Tweets **May 2019-January 2020**

- Data preparation by removing stop words, removing duplicates, and stemming tweets
- Extracted relevant health concerns regarding artificial sweeteners.
- Created temporal graphs to discover the public perception of artificial sweeteners and detect articles that cause misinformation.
- Resulted in a paper entitled "Natural vs. Artificially Sweet Tweets: Characterizing Discussions of Non-nutritive Sweeteners on Twitter", which was accepted to Health Intelligence workshop in AAAI 2020.

University of Colorado Boulder **January 2020-Present**
Graduate Teaching Assistant

- INFO 1201: Computational Reasoning 1; Instructor: Jason Zietz **Spring 2022**
- INFO 1101: Computation in Society; Instructor: Chris Carruth **Spring 2021**
- CMCI 1010: Concepts and Creativity; Instructor: Lecia Baker **Fall 2021**
- INFO 1201: Computational Reasoning 1; Instructor: Jason Zietz **Spring 2020**

Projects

Vaccine Disinformation in the Reproductive Health **January 2022 -Current**

- Examines the vaccine disinformation that targets the preproduce health on social media.
- Analyzed and performed qualitative inductive thematic analysis and discord analysis on tweet.

Vaccine Hesitancy **January 2022 -Current**

- Conducted 12 interviews to understand how vaccine hesitant people change their minds to get vaccinated

Landscape of Twitter's Deception: Bots and Automation **August 2020-May 2021**

- Investigated the legal, technical and the business of bots in Twitter .
- Purchased bots to analyze the behaviors and features by collecting data using Twitter API.

Dashboard to Extract Tweets **Spring 2021**

- Create a dashboard using streamlit library on Python which extracted tweets on the provided user name which then could be searched on keywords.

Detecting Content Change in Text Data **Fall 2019**

- Derived text embeddings by using both word2vec, and Term Frequency-Inverse Document Frequency (TF-IDF) models.
- Measured the change in ideas by comparing the cosine similarity of the different sentences in the text documents and ranking their de-similarities.
- Final output was a web interface that displayed corpora labeled with color coding according to the similarities between sentences.

Customer Churn Prediction **Spring 2019**

- Built predictive models such as Support Vector Machines and Multilayer Perceptrons to predict whether a customer will churn in a telecom company.

Academic Service

Graduate Student Association (GSA) Vice President
Information Science Department at University of Colorado Boulder

Graduate Student Association (GSA) International Representative
Information Science Department at University of Colorado Boulder