

Building Visual Analytics Tools for Enabling Human-Centered Data Science

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Human-Centered Data Science (HDS)

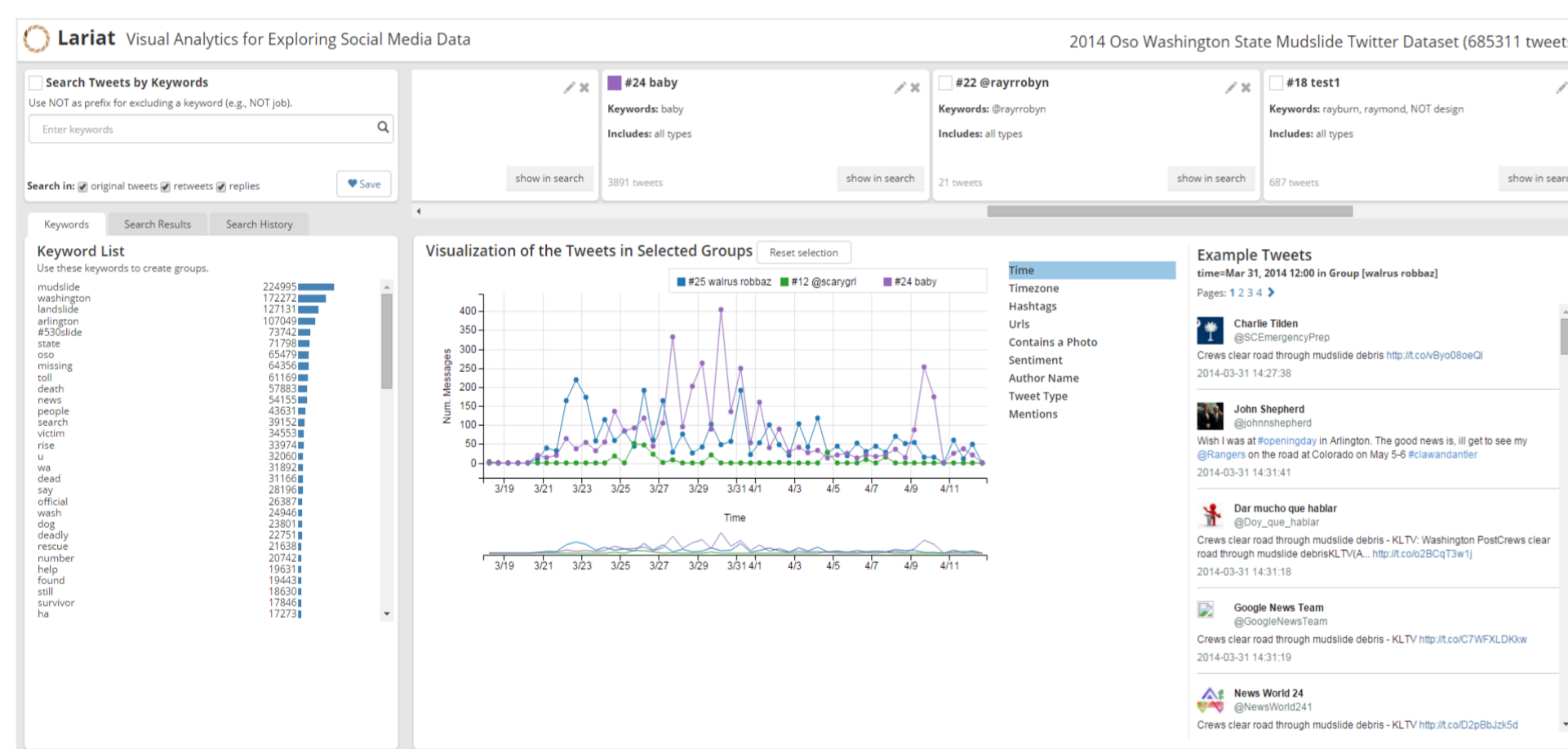
Emerging from the intersection between human-computer interaction (HCI), computer-supported cooperative work (CSCW), and visual analytics and data science, research in Human-Centered Data Science (HDS) focuses on understanding how people explore and gain insights from vast datasets and build tools to support their interaction with data. One ultimate goal of HDS is to ensure that computational tools facilitate human reasoning and understanding, specifically in the context of big data.

About Human-Centered Data Science Lab (HDS Lab)

The HDS Lab is directed by Dr. Cecilia R. Aragon in the Department of Human Centered Design & Engineering. Members in the lab use both quantitative (statistical and computational) and qualitative (ethnography, human-centered design) methods to study how people make sense of very large data sets. We then build visualizations, games, and other software to enable these interactions.

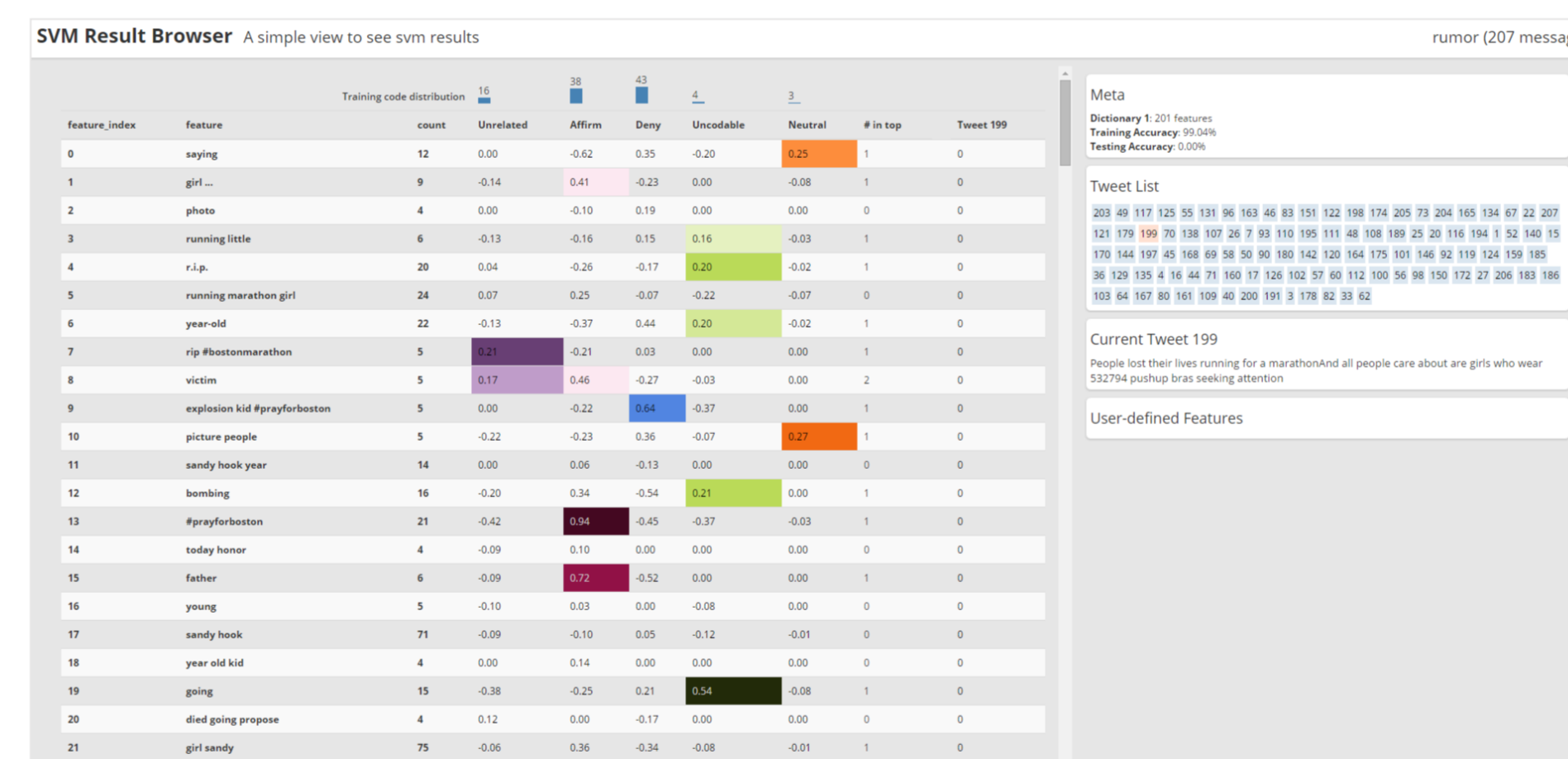
Exemplar Projects

Lariat: Visual Analytics for Exploring Social Media Data



Lariat is a tool for social media research to explore twitter data. The design stemmed from a series of interviews with social scientists and a participatory design session. One key feature of the tool is to let users generate plots on the fly and use them as a way to drill down into a specific subset of tweets, supporting the sense-making process.

Visual Analytics for Qualitative Coding



Qualitative coding is often used by social scientists to explore and analyze their datasets. As the scale of the data grows, coding the whole dataset may not be feasible. This project focuses on parsing out design requirements to facilitate the coding process of social scientists, and to leverage machine learning and visualization for coding.

We are looking for interviewees!

To get more details →



Visual Analytics for Scientific Script Comprehension



In the movement of open science, scientists are encouraged to share the scripts they use to generate results. However, given a set of scripts, it may not be easy to comprehend their use and relations. In this project, we plan to explore the design space in this context and build visual analytics tools to support the comprehension tasks.

