

Making Data Personal

Using the “lifelogging” movement to create datasets that inspire curiosity for visualization

Idea

The average undergraduate in communication does not share the industry’s enthusiasm for “data journalism.” Just the word “data” can seem intimidating or dull, and many of the best resources for public data reinforce this impression with complex spreadsheets full of acronyms, notes and references to other spreadsheets. To forge ahead and teach visualization skills without meaningful understanding of the data is baffling for students rather than illuminating. To introduce the skills that will eventually get students to a proficient level of data literacy, students can get started by going in-depth on a topic they know better than anyone else: themselves.

There may not be a lot of news value in how much you sleep you get, how many steps you walk or how much you spend on food, but tracking this information can improve your life by identifying patterns and ultimately inspiring new habits. That’s the idea behind the trend often referred to as “lifelogging” or “The Quantified Self,” and it’s an intriguing and accessible way to get students interested in data collection, analysis and visualization.

Goals

The primary goal of using personal data in a visualization course is getting students curious about data and excited about the visualization possibilities. Whether or not you think there’s much truth to the stereotype of self-absorbed Millennials, using an accessible topic (your own life) is way to build confidence and interest in new skills. Professionals who visualize data look forward to the moment of reveal when you finally get to see how a dataset shapes up; there’s suspense and excitement in it, but it’s difficult to give students that feeling of discovery unless they truly care about and understand the data.

Some additional goals of using personal data for visualization:

- Engage students on topics of personal interest and expertise
- Apply data collection and organization methods in a practical way
- Discuss issues in data collection: bias, error, missing data, etc.
- Experiment with chart forms and evaluate how well each fits the data
- Make data visualization a rewarding part of the process
- Give students confidence in their ability to communicate with data

How it works in the classroom

A personal data project can be scaffolded in multiple ways in the classroom depending on the overall goals of the course. It can be used for a one- or two-week introductory assignment or a long-term final project tracking data for the entire semester. I used the second approach in an “Introduction to Data Visualization” course with no data-related prerequisites. The project was

introduced in the second week with multiple check-ins leading up to a final product due during Finals Week. Students were required to collect data on a daily basis for a minimum of 10 weeks.

Fortunately, there are inspiring examples of personal data used in novel ways — Nicholas Felton’s annual reports and the more recent “Dear Data” project are two prominent ones — and there are many smartphone apps that keep the data collection process from becoming onerous. A number of my students already used apps or devices (such as smartwatches and Fitbits) that tracked certain activity, which was an excellent opportunity to talk about the format of that data.

Some examples of data that students tracked:

- Steps walked per day
- Money spent on food and beverages
- Smartphone app use (time and data usage)
- Number and type of emails per day
- Driving destinations and distances
- Sleep (starting and ending time each night)
- Emotional state (collected multiple times per day with a timed survey)

Students first proposed their topic and data collection method, then provided updates every few weeks. They were required to explore the data with multiple chart forms and combinations before ultimately creating a project poster with a primary chart and three secondary charts. This would also work well in a digital format, with each student keeping a blog with updates that culminate in a final web presentation.

Because each student has a unique dataset and visualization challenge, this is a great opportunity for peer feedback and discussion.

Student reaction

Most students enjoyed this approach and liked sharing updates and tips with their classmates. Some students had intriguing ideas for data that became difficult to track, while others defaulted to whatever they could track easily even if it was not of much interest to them. However, I was surprised by how many students used the assignment as a sincere attempt for self-improvement, tracking data related to fitness, diet, finances and online procrastination.

Some students balked at the idea of sharing information about their personal lives, which is a valid consideration. We were able to figure out topics for them, often related to their part-time jobs.

Students still struggled with the best way to visualize their data, but in most cases this frustration was evidence that they understood the data and what they wanted to communicate better than they could execute it. A number of students reported that the data surprised them in some way, and some said they intended to keep tracking the data in hopes of seeing greater improvement.