HS 312 - Introduction to Science and Technology Studies

Getting Personal with Data: Production and Visualisation/Visceralization of a Dataset

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1 Data Description

1.1 What did I collect and why?

I collected detailed records of my daily smartphone screen time between April 1, 2025 and May 3, 2025, categorizing usage into four primary groups: **Social, Entertainment, Games, and Other** (which includes Productivity, Education, and Information activities). This dataset serves as a digital mirror reflecting my behavioral patterns, priorities, and unconscious habits. The collection was done in order to try and understand how my digital consumption aligns with academic responsibilities and personal entertainment, particularly after noticing unexpectedly high initial usage.

1.2 How did I gather it?

Data was manually tracked using Apple's Screen Time feature, with daily exports to CSV format. Minor categories (Productivity & Finance, Information & Reading, Education) were later merged into "Other" to reduce visual clutter.

2 Data Structure

The dataset comprises of:

- 33 daily records in CSV format
- 8 categories (Date, Social, Entertainment, Productivity & Finance, Information & Reading, Education, Games, and Other)
- Date stamps in YYYY-MM-DD format
- Normalized values (minutes) for cross-day comparison

Post-processing merged three less frequent categories (Productivity & Finance, Information & Reading, Education) into "Other" to maintain analytical focus on dominant usage patterns while preserving secondary activities.

3 Reflection

3.1 Challenges

- **Observer Effect**: Initial recording on April 17 revealed high usage, prompting immediate behavioral change

- **Context Capture**: Difficulty quantifying "productive" vs "distractive" usage within some apps like 'Safari'

3.2 What does this data reveal about my life?

The dataset exposes some behavioral phases:

1. **Pre-awareness Phase** (April 17): Screen time was high, peaking on April 12th, 2025, with most usage coming from Social and Entertainment categories. This prompted me to become more conscious of my screen time, leading to a noticeable reduction in the following days.
2. **Exam Adaptation Phase** (April 29): There was a significant increase in the "Other" category due to study-related mobile usage, such as accessing Moodle readings or viewing PDFs and summaries on WhatsApp.

Notably, the IPL cricket season created Entertainment spikes even during reduction phases, while meal-time study habits explain elevated screen time during the exam time.

3.3 Design Choices and Challenges

The circular clock-face visualization emerged from two key considerations:

- **Temporal Symbolism**: Clock metaphor emphasizes time's cyclical nature
- **Proportional Scaling**: The radius of each circle is proportional to the maximum total screen time, creating a visceral impact and highlighting daily variations in usage.
- **Color Semiotics**:
  - Gold (Social): Represents the value of relationships
  - Blue (Entertainment): Suggests calm, leisurely engagement
  - Teal (Games): Reflects stress relief and a way to avoid checking WhatsApp too often
  - Orange (Other): Symbolizes warm, productive use of time

But the process wasn't smooth. At first, I tried basic pie charts, but they felt flat and repetitive. I wanted something more meaningful — something that could reflect both the amount of usage and how it felt. Eventually, the clock metaphor emerged as a blend of structure and storytelling.

Some apps, like the browser, didn't always fit neatly into one category. Sometimes I used it for entertainment, other times for studying.

One challenge I faced was that a typical clock-style visualization only showed the percentage breakdown of categories like Social or Entertainment, but not how much total screen time I actually had each day. This made it hard to see the bigger picture — a day with balanced categories might still mean 9-10 hours of usage. That's why I decided to scale the radii of each day's circle in proportion to the maximum total screen time. It made the visualization more honest and impactful — not just showing what I used my phone for, but how much I used it.

3.4 How the process changed the view of my data?

Tracking my screen time didn't just show me the data — it actually changed my behavior. The moment I started measuring, I became more aware of how and when I was using my phone. I also noticed a pattern: I often studied on my phone during meals, which explained higher screen time even during exams.

4 Representation

All related files, including the dataset and visualizations, are available in the GitHub repository.
GitHub link: https://github.com/mysticusaa/HS-312-Assignment.git