



The world is awash with data. In the last few years, a collision of technologies has allowed us to record massive amounts of information. The question that we are faced with now is: **How can we make sense of it?** In this course, we'll explore traditional analysis and visualization techniques, alongside novel strategies and exploratory methods. We'll build tools to navigate through huge data sets, and will learn how to represent data in visual, aural, and physical form. Students will work in Processing to design and build their own unique data representation projects.

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Structure

Data representation is a 14 week course. The final goal will be to produce novel data-based projects using Processing. Classes will typically involve a short lecture period examining techniques and concepts, followed by a working period in which we will build small software tools.

Grading

Grading in this course will be largely project-based. A break-down of the grading structure is as follows:

- 20% Attendance & Participation
- 30% Midterm Project Assignment
- 50% Final Project Assignment

Schedule

The following is a rough course schedule. Please note that this schedule is likely to change as we explore new topics and pursue new discussions.

Attendance is mandatory. If for some reason you are unable to attend, you must notify me in advance, and arrange with another student to get class notes & exercises.

Visualization Techniques

Day 1	Introduction
Day 2	Visualization 1 - CSV
Day 3	Visualization 2 - XML
Day 4	Visualization 3 - JSON
Day 5	Databases & Processing

APIs & Data Sources

Day 6	The NYTimes Article Search API
Day 7	Geospatial Data
Day 8	Interactive Visualizations
Day 9	Narrative and Exploration

Beyond Visualization

Day 10	Sonification
Day 11	Data & Form
Day 12	Data, Participatory Practice & Public Space

Project Work

Day 13	Project Work
Day 14	Project Work