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, audial, 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