Data is complex. Vis can help make sense of it.

This course introduces the theory and practice of designing effective visualizations of data from sources spanning scientific, biomedical, social media, economics, climate modeling, politics, engineering, and more. We will leverage the processing programming language as our primary tool for this:

http://www.processing.org

The course will also briefly cover background topics focused in computer graphics, scientific computing, data mining, and image processing. We couple these fields with artistic, psychological, perceptual, and human-computer interaction concerns.

**Topics covered**

- Visualization Fundamentals: Design principles, visual encodings, use of color, data abstraction, interaction, perception, filtering
- Non-spatial visualization: tabular data, trees, graphs, text, flow, time-series, uncertainty
- Spatial visualization: scalar volumes, volume rendering, isosurfacing, transfer function design, vector fields, maps

**Prerequisites**  
Students are expected to have basic programming skills and introductory knowledge of linear algebra and calculus. Previous coursework in computer graphics is helpful but not required.

NOTE: Students majoring in areas other than CPSC are especially encouraged to enroll.

Additional information, course syllabus, and more here:

http://people.cs.clemson.edu/~levinej/F14/8810