

cis3.5, fall 2009, lab II.4 / prof sklar.  
Exploring Data Visualization through “Many Eyes”

## 1 Getting Started with “Many Eyes”

**Many Eyes** is a community web site hosted by IBM that supports a range of different types of data visualizations. You can create visualizations using your own data or data available on the Many Eyes site. You can view visualizations uploaded by others, and you can upload your own visualizations. This lab will focus on exploring the types of visualizations available through Many Eyes.

### 1.1 First, go to the web site:

<http://manyeyes.alphaworks.ibm.com/manyeyes/>

You will see there are three main sections to the site (look at the upper left corner of the page):

- **explore**
- **participate**
- **learn more**

We will start with **explore** and **learn more**—*reading about and looking at what's there*—and then move on to **participate**—*creating your own visualizations*.

### 1.2 Second, read the **Gallery & Tour** page. Click on **quick start** under **learn more** on the main page.



URL: <http://manyeyes.alphaworks.ibm.com/manyeyes/page/Tour.html>

### 1.3 Third, study the **types of visualizations**. The following types of visualizations are available:

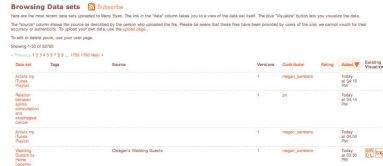
- **geographic maps**—to overlay data values on a map of a geographic region (e.g., a country)
- **line** and **stack** graphs—to track data that rises and falls over time
- **bar charts**, **block histograms**, **bubble charts** and **matrix charts**—to compare a set of values
- **scatter plots** and **network diagrams**—to see relationships among data points
- **pie charts** and **tree maps**—to see parts of a whole
- **tag clouds** and **word trees**—to look for common words in a text

You can study information about each type by clicking on **visualization types** under **learn more**.



URL: [http://manyeyes.alphaworks.ibm.com/manyeyes/page/Visualization\\_Options.html](http://manyeyes.alphaworks.ibm.com/manyeyes/page/Visualization_Options.html)

1.4 Fourth, study the **data sets** that are available on the site. Click on **data sets** under the **explore** heading on the main page.



URL: <http://manyeyes.alphaworks.ibm.com/manyeyes/datasets>

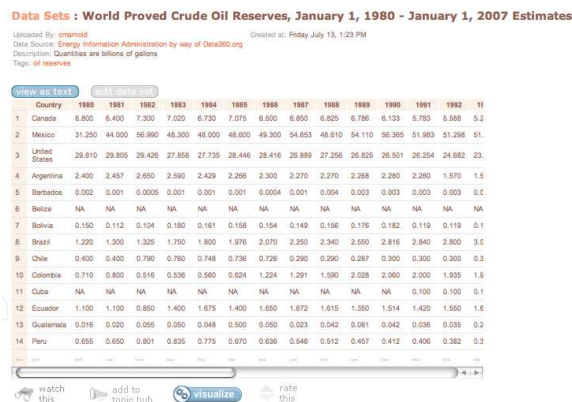
To view a particular data set, click on its title in the far left column (under **Data set**).

1.5 You can also search for particular data sets. There is a **search** area in the upper right corner of the page.



Enter the text “oil reserve” in the search box and click on “search”.

You will get a list of data sets that match. Click on the title “World Proved Crude Oil Reserves, January 1, 1980 - January 1, 2007 Estimates” (under **Data set**). You’ll get a screen that contains information looking like this:



Below this and to the right, you’ll see a section that looks like this:

Visualizations of this data set



Click on the orange world map, and you’ll see a geographic visualization of this data. You can use the pull-down menu labeled **Color Countries by:** to see how the crude oil reserves have changed from one year to another.

Hopefully, by now you are getting an idea of the richness of Many Eyes!

Now you are ready to go on and create something yourself :-)

## 2 Creating something with “Many Eyes”

The main part of this lab involves creating visualizations yourself. Use the “World Proved Crude Oil Reserves” data set (above) to get started. Then feel free to use your own data.

- 2.1 Go back to the sample data set screen from above, labeled “Sample Data Set” (step 1.5). Click on the **visualize** button:



There are 6 categories of visualizations listed:

1. Analyze a text
2. Compare a set of values
3. See relationships among data points
4. See the parts of a whole
5. See the world
6. Track rises and falls over time

**Try to create at least one visualization from each category using this data set.**

Make note of which visualizations work with this data set and which do not.

Some are effective at showing trends in the data.

Some produce a visualization, but it doesn't tell you much (for instance the “tag cloud” is kind of meaningless for this data set).

Some won't even produce a visualization (for example, the “wordle” produces an error).

- 2.2 Go back to the list of data sets screen from above, labeled “List of Data Sets” (step 1.4).

**For each visualization type (above) that didn't work with the oil reserve data set, try to find another data set that does work.**

- 2.3 Save some pictures!

If you are using a Mac, then it is easy to save the pictures you create. From the **Finder**, double-click on **Applications** and then **Utilities**. In the Utilities folder, you'll find an application called **Grab**. Double-click on the **Grab** icon to start it up. Grab will let you save a portion of the screen or a whole window. Use the **Capture** menu to grab what you want. Then use the **File - Save** option to save what you grabbed. Note that Grab only saves images in TIFF format.

## On-line references

Many Eyes

- <http://manyeyes.alphaworks.ibm.com/manyeyes/>