




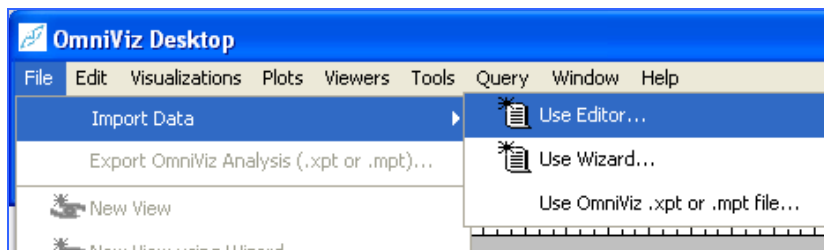
## Getting started with OmniViz

# Finding Patterns in Large Numeric Tables using the Galaxy Visualization

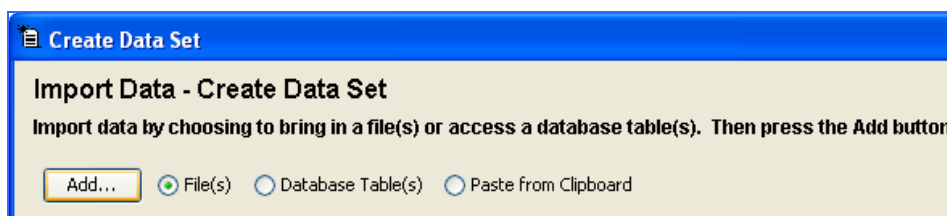
 **NOTE:** Your data must be in a table (Excel, tab delimited, comma delimited etc.) which contains column headings and row titles. The row titles must contain some letters (i.e. they cannot be all numbers).

### Step 1. Import your Data Table into OmniViz

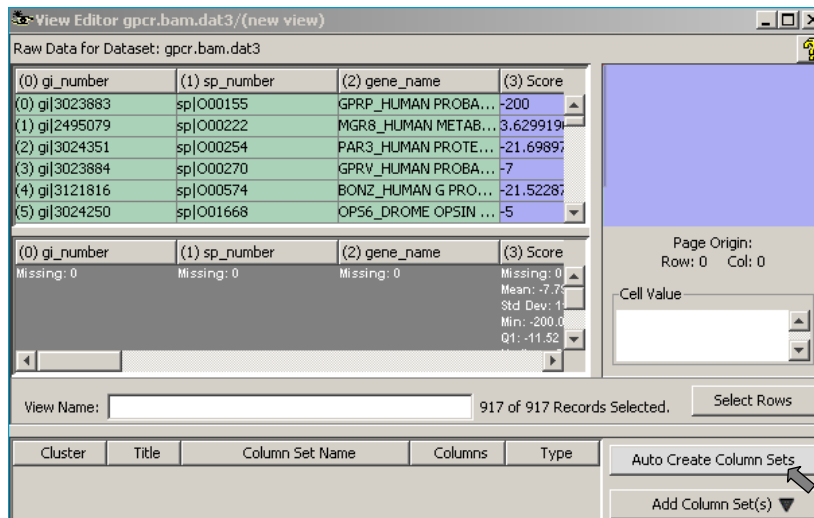
1. Open OmniViz. In the **OmniViz Desktop**, click on **File → Import Data → Use Editor**. A series of dialogue boxes will follow.



2. In the **Create Data Set** window, make sure the **File(s)** button is selected (the default) and click on **Add**. Navigate to your data file of interest.

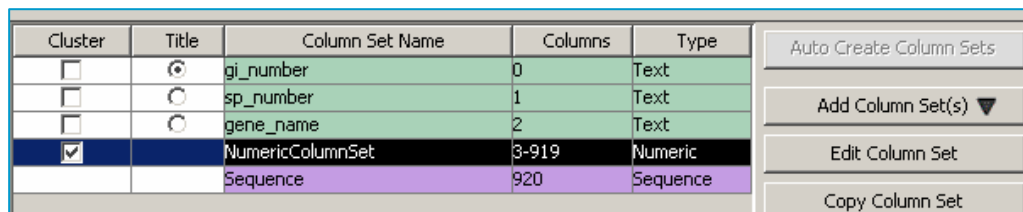


3. Click on **Import All**. OmniViz will then start to import the data file. When complete, you will see your file in the **Create Data Set** window, with the number of rows and columns listed.
4. Give the Data Set a name and click on **Done**.
5. In the **View Editor** window, click on **Auto Create Column Sets**.

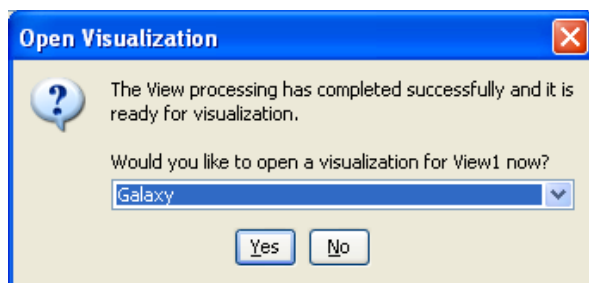


This will result in a list of “column sets”. One column set (usually the first one) will be green (for textual data) and marked as the title. Most of the rest of the data column sets should be blue (numeric data) or tan (categorical data).


- Click on the checkbox (under the **Cluster** heading) next to each numeric data row (blue).

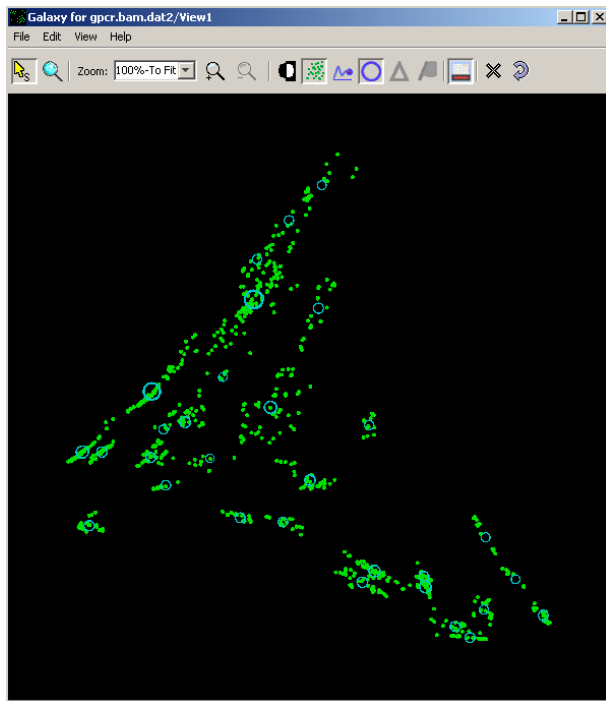


- Click the **Process Locally** button at the bottom left of the View Editor window.
- Name the view (or accept the default) and click **OK**.
- OmniViz will then start to process the view using default settings. When processing is complete, you will be able to open a visualization (**Galaxy** is the default visualization presented). Click **Yes**.



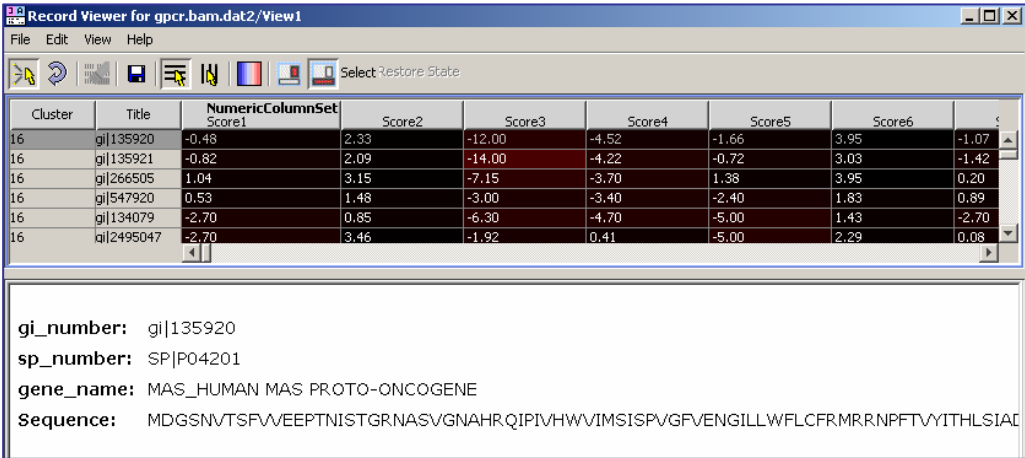
## Step 2. View your Data in the Galaxy Visualization

1. If you have not already opened up the **Galaxy** visualization, you can do so by highlighting the data set **View** in the **Projects** window and clicking on the **Galaxy** icon  in the **OmniViz Desktop** (or access this visualization from the Visualizations menu on the OmniViz Desktop).



In the **Galaxy**, each point represents a row (e.g. of sample data) in your table. Similar rows (points) are grouped together in clusters; the stronger the similarity, the tighter the points are grouped together. Each cluster will have a circle at its centroid; the larger the circle, the larger the cluster (i.e. number of rows). Rows that are very different from the rest will be on their own on the edges of the Galaxy.

2. To see the actual values of a given cluster, double-click on one of the cluster centroids. This will launch the **Record Viewer**, where the rows (e.g. sample data) will be displayed.



The screenshot shows a window titled "Record Viewer for gpcr.bam.dat2/View1". It displays a table with columns for Cluster, Title, NumericColumnSet, Score1, Score2, Score3, Score4, Score5, Score6, and Score7. Below the table, there is a section for metadata including gi\_number, sp\_number, gene\_name, and Sequence.

Cluster	Title	NumericColumnSet	Score1	Score2	Score3	Score4	Score5	Score6	Score7
16	gi 135920		-0.48	2.33	-12.00	-4.52	-1.66	3.95	-1.07
16	gi 135921		-0.82	2.09	-14.00	-4.22	-0.72	3.03	-1.42
16	gi 266505		1.04	3.15	-7.15	-3.70	1.38	3.95	0.20
16	gi 547920		0.53	1.48	-3.00	-3.40	-2.40	1.83	0.89
16	gi 134079		-2.70	0.85	-6.30	-4.70	-5.00	1.43	-2.70
16	qi 2495047		-2.70	3.46	-1.92	0.41	-5.00	2.29	0.08

gi\_number: gi|135920  
sp\_number: SP|P04201  
gene\_name: MAS\_HUMAN MAS PROTO-ONCOGENE  
Sequence: MDGSNVTSFVVEEPTNISTGRNASVGNHRQIPVHWVIMSISPVGFVENGILLWFLCFRMRNRPFTVYITHLSIAC

3. To see a different group of rows, simply click on the cluster centroid in the Galaxy, and the rows will appear in the Record Viewer. Reposition and resize the Record Viewer and Galaxy windows so you can easily move between them.