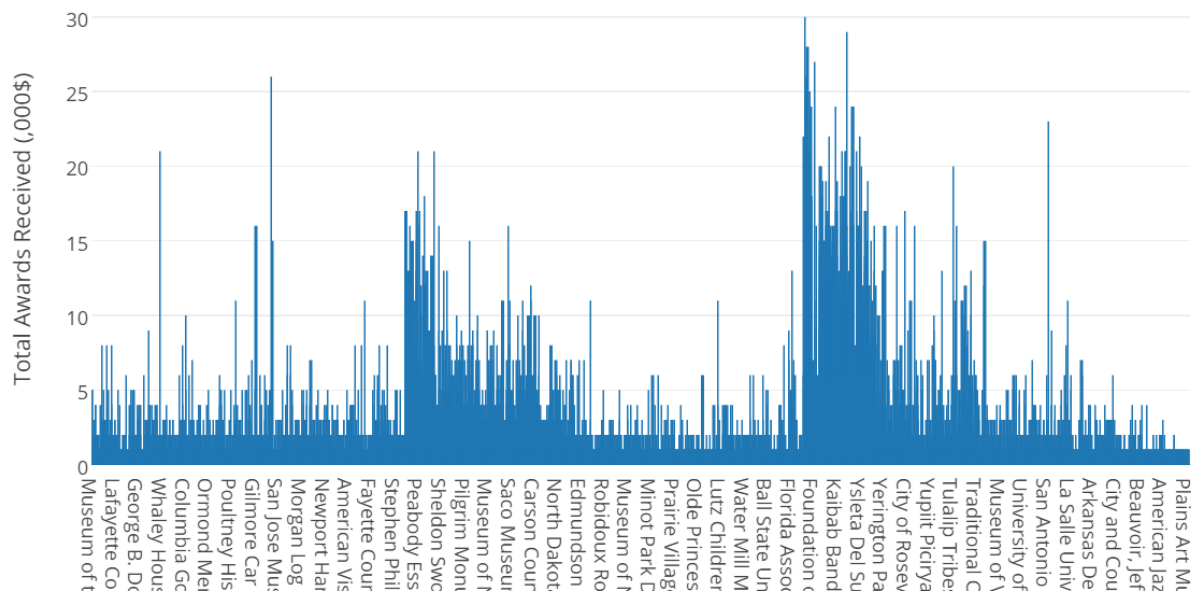


Part 4: Narrative Report on IMLS Dataset

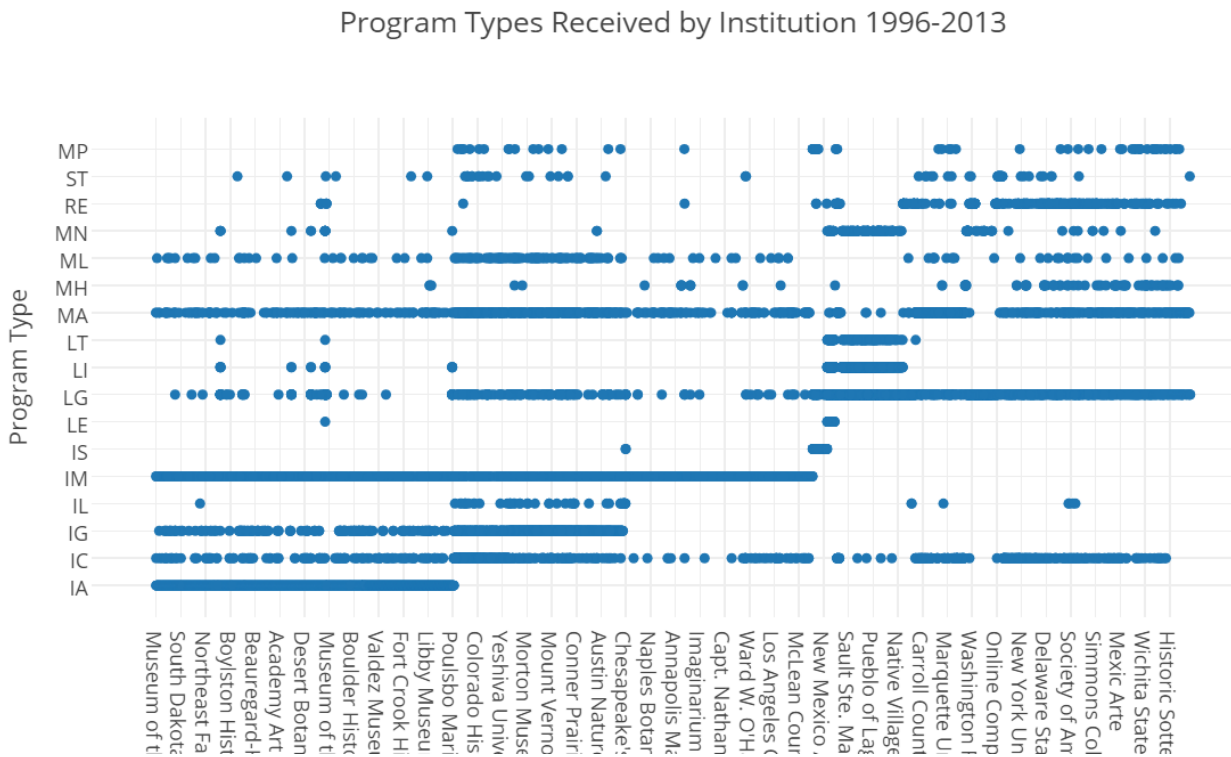
IMLS dataset provides the distribution of 17 IMLS grants received by different institutions in the United States, and it has 43 columns or headers as processed via Jupyter notebook. Generally, three visualization figures are generated with selected data, aimed to display the distribution from three different angles.

- I. Figure 1 displays the total awards that are received by each institution during 1996 and 2013. From this figure, it can be easily seen that how much awards each institution has received during the designated years. The figure also provides the following information: which institutions have generally received the most grants, which states have roughly received the comparably least grants, or on which average level the institutions have posed.

Total Awards Received by Institution 1996-2013



- II. Figure 2 displays how many program types that each institution has received during the designated years of 1996-2013. The X axis represents institutions, while the Y axis program types. From the visualization, it can be found that MA, LG, IM, IC, and ML are the programs that are received by the most institutions. LE and LS are the programs that are received by the least number of institutions.



- III. Figure 3 adopts box plot to display the relationship between the program type and the states during the designated years of 1996-2013. From the box plot visualization, it can easily be concluded which program types that each state has received, what median each state stands in the types of awards. It also indicates the maximum number of awards and the minimum of awards that are received by each state. The outliers are marked in dots, which makes it directly perceivable in detecting those awards that are rarely received by each state.

