

A box plot showing the distribution of the number of non-zero elements in the matrix A for different values of n (1 to 8). The x-axis is labeled with n values from 1 to 8. The y-axis represents the number of non-zero elements, ranging from 0 to 10. The plot shows that the number of non-zero elements increases with n , with a median around 4 for $n=1$ to 6 , and around 5 for $n=7$ and 8 . The distribution becomes more spread out as n increases.