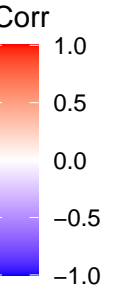


The heatmap displays the distribution of the number of non-zero elements in the product of two sparse matrices. The x-axis represents the number of non-zero elements in the product, ranging from $D-28$ to $D+28$. The y-axis represents the number of non-zero elements in the input matrices, with categories K, L, E, T, S, V, and N. The color scale indicates the frequency of each combination, with red representing the highest frequency and white representing zero.



The heatmap shows the following patterns:

- Class K (Red):** Features F-28 to F-15 are at 1.0. F-14 to F-1 are at 0.5. F0 to F17 are at 0.25. F18 to F28 are at 0.0.
- Class L (Blue):** Features F-28 to F-15 are at 0.5. F-14 to F-1 are at 0.25. F0 to F17 are at 0.0. F28 is at 0.25.
- Class E (White):** Features F-15 to F-1 are at 1.0. F0 to F17 are at 0.0.
- Class T (Dark Blue):** Features F-28 to F-15 are at 0.25. F-14 to F-1 are at 0.0. F0 to F17 are at 0.25.
- Class S (Light Purple):** Features F-28 to F-15 are at 0.25. F-14 to F-1 are at 0.0. F0 to F17 are at 0.25.
- Class V (Medium Purple):** Features F-28 to F-15 are at 0.25. F-14 to F-1 are at 0.0. F0 to F17 are at 0.25.
- Class N (Dark Blue):** Features F-28 to F-15 are at 0.25. F-14 to F-1 are at 0.0. F0 to F17 are at 0.25.



Heatmap showing the distribution of 28 variables across 28 categories. The x-axis is labeled with categories N-28 to N-1, N0 to N15, and N16 to N28. The y-axis is labeled with variables K, L, E, T, S, V, and N. The color scale ranges from 0 (white) to 1 (dark red). The heatmap shows a clear pattern of high values (red) for variables K, L, and E across most categories, and lower values (purple/blue) for variables T, S, V, and N.

