Min-Max Normalization:

* This formula normalizes the values in each column, scaling them between 0 and 1.
* *Dij*​ is the original value, and *Nkj*​ is the normalized value.
* The min and max functions are computed within each group defined by the binary column.

Mean Calculation:

* This formula calculates the mean of the normalized values for each group separately.
* The indicator function 1(1(*Oi*​=*k*) is 1 if the binary column value matches the group, and 0 otherwise.

**Euclidian distance:**

This formula calculates the Euclidean distance between the mean vectors of the two groups.

The distance quantifies the dissimilarity between the two groups' mean vectors.