$$z = \frac{\pi(positive\ index\ values\ of\ N\ index\ values)}{\pi(negative\ index\ values\ of\ N\ index\ values)}.$$

[56]where, "π" is a product operator, that is, for any group of N indexes, "the ratio of all positive index values to all negative index values" is used to assess the overall quality of N indexes, and the larger the value of z is, the better the group of indexes are.

[57]It may be understood that the above are only two simple examples of the function g, and according to the actual requirements, the function may have other variants. For example, the weighting method may be used for the function in the form of a difference, that is, a correction factor is specified as a weight for each index value.

[58]If the priorities of different index values are predefined, a fixed correction factor may be specified for each index value. These correction factors may be obtained through machine learning based on the historical data, or may be manually allocated (for example, a correction factor with a larger absolute value may be specified for an important index).

[59]If the priorities of different index values cannot be predefined, correction factors may be randomly generated as weights for N index values, respectively, and then the corrected N index values are weighted. During the cyclic processing, different correction factors may be randomly generated in each cycle, and the best (or approximately the best) correction factor combination may be adaptively selected through a plurality of cyclic selections.

[60]In addition, the score of each combination may be corrected according to the overall distribution of K combinations. The principle is that the denser the distribution points are, the larger the penalty correction factor may be given to the corresponding score. For example, if M features are mapped into an M-dimension space, then K combinations may be mapped into K points in the space. For point k (k=1, 2, …K), if other points are distributed around, a penalty correction is made for the score $z_k$ and the penalty correction factor is positively correlated to the number of other points distributed around. For example, the penalty correction formula may be set to $z_k' = \frac{z_k}{\text{number of other points around point k within the radius R}}$, where R is a preset value, for example, a Euclidean distance in the M-dimension space. Of course, the correction formula is only used to give an exemplary description and should not be interpreted as a restriction of the solution in the present specification.

[61]In addition, it may be understood that the execution sequence of steps S101 and S102 is not restricted as long as they are completed before step S103.

[62]S104: Cross the combinations in set P in pairs to reorganize the combinations.

[63]"Crossing the combinations in pairs to reorganize the combinations" means selecting two