MOFA \((E, B, z, \text{min\_size})\)

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For \(SP = M/G1, G1, S, S/G2\) or \(G2/M\)

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Search all possible \(R\)'s in \(SP\)
Record a particular \(R\) and the corresponding \(C(R,z)\) if \(#(C(R,z)) \geq \text{min\_size}\)
Sort recorded \(R\)'s according to their sizes and denote the sorting result as \(\hat{R} \)'s
For \(i = 1,2,\ldots\)

\{
If \(EC(C_i \triangleq C(\hat{R}_i,z)) \leq EC(SP)\), iteratively eliminate genes in \(C_i\) starting from the
one with the most dissimilar expression profile, say \(h\), until

\[EC(\tilde{C}_i \triangleq C_i \setminus \{h\}) > EC(SP)\]

Output the TF combination \(\hat{R}_i\) and module \(\hat{M}(\hat{R}_i) \triangleq \tilde{C}_i\) if \(#(\hat{M}(\hat{R}_i)) \geq \text{min\_size}\)
Mark all genes in \(\hat{M}(\hat{R}_i)\) so that they are not considered for \(\hat{R}_j \subset \hat{R}_i\)

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