

# GR5261 Report Scratch

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**Data:** SP500 *STOCKS* with their daily closing *PRICES*, cluster size *SIZE*  
Compute the absolute correlation matrix  $COR_{MATRIX}$  among *STOCKS*;  
Find the pair (*STOCK1*, *STOCK2*) with least absolute correlation;  
Set  $CLUSTER = [STOCK1, STOCK2]$ ;  
**while**  $CLUSTER.size < SIZE$  **do**  
    **for**  $s$  **in** *STOCKS* **do**  
        **if**  $s$  **not in**  $CLUSTER$  **then**  
            Set  $CorWithCluster = 0$ ;  
            **for**  $s2$  **in**  $CLUSTER$  **do**  
                 $CorWithCluster = \max(CorWithCluster, COR_{MATRIX}[s, s2])$ ;  
            **end**  
        **end**  
    **end**  
    Find  $s$  with MINIMUM  $CorWithCluster$ ;  
    Append  $s$  to  $CLUSTER$ ;  
**end**  
**return**  $CLUSTER$ ;

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**Algorithm 1:** Clustering Minimum Correlated Stocks

