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**Algorithm 1:** Select best weights and parameters combinations.

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**Data:** train data  $\mathbf{X}$ ; all parameters combinations  $\mathbf{P}$ ; random weights amount  $\mathbf{K}$ ; final models amount  $\mathbf{N}$

**Result:** best weights  $\mathbf{BW}$ ; best parameter combinations  $\mathbf{BP}$

```
1 M = SARIMAX(p) for all p ∈ P
2 Y = m(X) for all m ∈ M // predicted data from all models
3 // P, M, Y should always have the same length
4 while len(M) > N do
5   for k ∈ 1, 2, ..., K do
6     w = random weights, sum = 1, length = length of M
7      $\bar{y} = \sum_{i=1}^{len(w)} w_i * Y_i$ 
8     Score = MAE( $\bar{y}$ , X)
9   end
10  BW = the w with lowest Score in the loop above
11  remove element with index argmin(BW) in M, Y, P
12 end
13 BP = P
14 return BW, BP
```

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