
Algorithm 1 Insertion Sort

Let A be an unsorted list containing real number positive values (to match our weight functions).

```
1: procedure INSERTION( $A$ )
2:    $i \leftarrow 1$ 
3:   while  $i < \text{length}(A)$  do
4:      $j \leftarrow i$ 
5:     while  $j > 0$  and  $A[j - 1] > A[j]$  do
6:       Swap  $A[j]$  and  $A[j - 1]$ 
7:        $j \leftarrow j - 1$ 
8:      $i \leftarrow i + 1$ 
```

```
use strict;
use warnings;
use Data::Alias;
#my @li = (31, 46, 10, 6, 23, 9, 29, 19, 3, 46);
sub InsertionSort{
  my $i = 1;
  while($i < scalar @li){
    my $j = $i;
    while($j>0 && $li[$j-1] > $li[$j]){
      alias @li[$j,$j-1] = @li[$j-1,$j];
      #li[$j], $li[$j-1] = $li[$j-1], $li[$j];
      $j = $j-1;
    }
    $i = $i+1;
  }
}
InsertionSort(@li);
```
