

# **Delaunay Triangulation**

## **Euclidean Minimum Spanning Tree**

### **- Definition**

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❖ The Euclidean graph induced from  $S$  is:

$$EG(S) = \{ (p_i, p_j, |p_i p_j|) : 1 \leq i < j \leq n \}$$

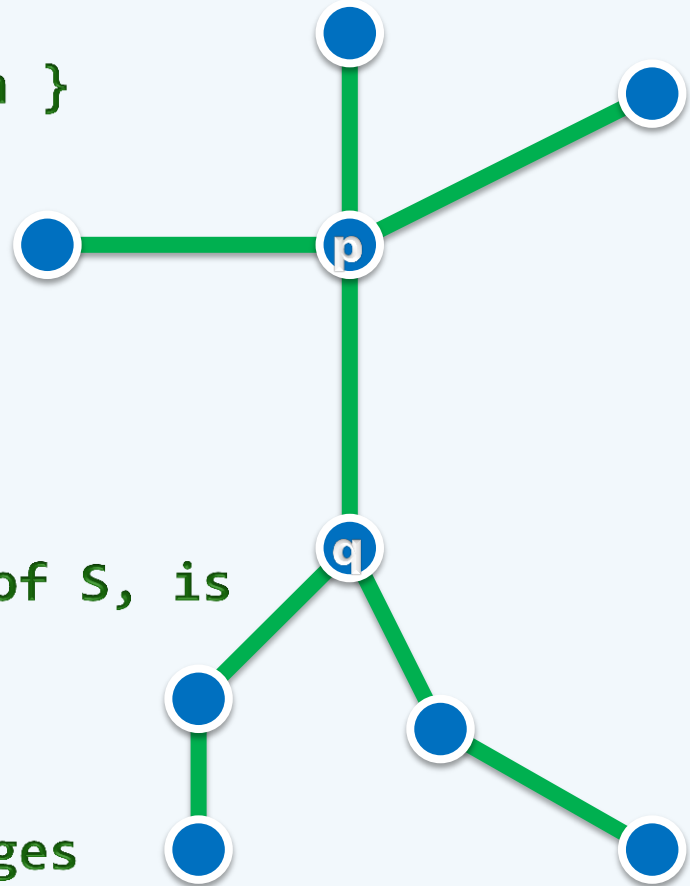
❖  $EG(S)$  is the complete graph on  $S$

weighted by Euclidean distance

❖  $EMST(S)$ , a Euclidean minimum spanning tree of  $S$ , is

a connected subgraph of  $EG(S)$

that minimizes the total weight of edges



❖ Each  $\text{EMST}(S)$

- is connected and
- contains exactly  $n - 1$  edges

❖ Hence  $\text{EMST}(S)$  is really a **tree** even though  
a point set  $S$  usually has more than one EMST

