Lab Report – 2

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1. Minimum Spanning Tree Algorithms:
   1. Kruskal Algorithm: Assume there are n nodes, usually we have n-1 iterations. First of all, we sort all edges by weight, then for each iteration we add an edge from short to long, unless the edge create a circle.

To avoid being a circle, we add two functions: union and find, in order to maintain the graph of the edges to be a tree to avoid creating a circle.

* 1. Prim algorithm: It’s much easier. First we create a joint matrix to indicate the connection relationship. Instead of sorting the edges by weight, we first start from a single node, and add a new node to an initially empty set one by one. Focusing on the nodes is the unique characteristics of prim algorithm.

1. Investigations about the python: introduce some tenser learning library

a) The implementation of DeepPy

Execute

python neural\_artistic\_style.py --subject images/tuebingen.jpg --style images/starry\_night.jpg

Then you can change a photo to an oil painting

b) TensorFlow

c) Caffe

d) Rippow: Change a photo to a two dimensional code