09.12.18

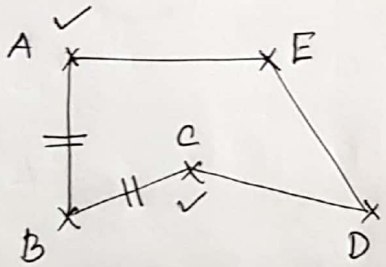
Two types of heuristics

* Construction heuristics
* Improvement heuristics

- Nearest neighbour heuristics
- Insertion heuristics
  - greedy insertion
  - Cheapest insertion
  - Farthest insertion

Assignment 3

Travelling Salesman Problem



Satisficing → Satisfying and sufficient.

A – B – A

A – B – C – A

- Greedy insertion: D, E

e.g., we have to insert D in such point, so that the cost minimizes.

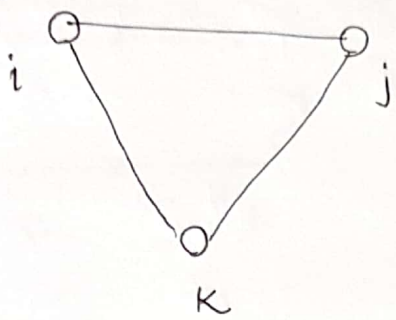
A–D–B–C–A

A–B–D–C–A

A–B–C–D–A

1. Which node I will insert?
2. Where will I insert that node?

• Cheapest insertion :



add : (i-K) +(K-j)

delete: (i-j)

→ We're taking lowest cost.

• Farthest insertion / Costliest insertion

→ We're taking costliest ~~no~~ edge.

→ This approach is used where we want to traverse the difficult paths first and then easy paths.