CITS3001 Algorithms, Agents and Artificial Intelligence

Labsheet 3: TSP algorithms

1. Implement and analyse the TSP algorithm based on minimum spanning trees, from Ps. 33–36 of Lecture 4.

2. Implement and analyse the insertion-based TSP algorithm, from P. 37 of Lecture 4. Implement all three heuristics.

3. Implement a simple hill-climber to improve the solutions from your TSP algorithms. Use 2-OPT for the improvement steps, and set it up so it can start from any of the previous algorithms.

   Which of the unimproved TSP algorithms works best?

   Which one works best with iterative improvement added?