

Artificial Intelligence Lab 7

September 10, 2018

1. Consider the road network in the Figure 1. Find the shortest path from source to goal using A^* algorithm with heuristic as Euclidean distance.
2. Suppose there are two modes of transportation, Cycle and Bus. The speed of cycle in a road is 25 km/hr. The speed of bus is 50 km/hr. The speed of the bus reduces by half on 50% congestion, and reduces to cycle's speed on full congestion. Speed of the cycle doesn't vary. At each node the optimal mode of transportation is chosen. Find the shortest path from source to destination and the time taken on
 - (a) full congestion
 - (b) 50% congestion
 - (c) No congestion

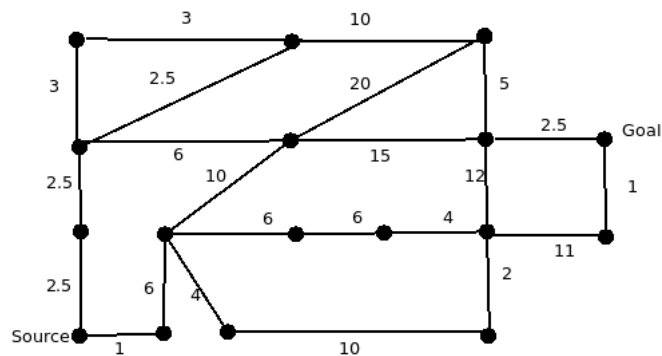


Figure 1: Road network