**Data Analysis** - Sample Date for a **40 Node Network - Single Source to Multiple Destinations**

Hopfield Neural Networks Convergent Algorithms

|  |  |  |
| --- | --- | --- |
| Hopfield Neural Networks | Source to Multiple Destinations | Total Cost |
| Park & Keum | 8-> 9-> 10-> 11 -> 20 -> 19 -> 18 -> 13 -> 14 | **207** |
| Park & Choi | 8-> 9-> 10-> 11 -> 20 -> 19 -> 18 -> 13 -> 14 | **207** |
| Ahn & Ramakrishna | 8-> 9-> 10-> 11 -> 20 -> 19 -> 18 -> 19 -> 20 -> 11 -> 12 -> 8 -> 7 -> 14 | **349** |
| Ali & Kamoun | 8-> 9-> 10-> 11 -> 20 -> 19 -> 18 -> 13 -> 14 | **207** |

Non-Neural Convergent Algorithms

|  |  |  |  |
| --- | --- | --- | --- |
| Source to Multiple Destinations | Dijkstra Algorithm | Bellman Ford Algorithm | Floyd Warshall Algorithm |
| 8-> 10 | 45 | 88 | 45 |
| 10-> 20 | 53 | 60 | 53 |
| 20-> 18 | 60 | 101 | 60 |
| 18 -> 14 | 46 | 46 | 46 |
| Total Cost For Multiple Destination | **204** | **295** | **204** |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Dijkstra | Bellman Ford | Floyd Warshall | Park & Keum | Ali & Kamoun | Park & Choi | Ahn & Ramakrishna |
| Total Cost For Multiple Destination | **204** | **295** | **204** | **207** | **207** | **207** | **349** |

Total Results for 40 Node Network - Single Source to Single Destination