**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 Metric Cost |
| Park & Keum | **1**->  **7**-> 10 -> 17 -> 25 -> **15** -> 24 -> **33** | **2333** |
| Park & Choi | **1**-> **7**-> 10 -> 17 -> 25 -> **15** -> 24 -> **33** | **2333** |
| Ahn & Ramakrishna | **1**-> **7**-> 10 -> 17 -> 25 -> **15** -> 24 -> **33** | **2333** |
| Ali & Kamoun | No Convergence | **−** |

Non-Neural Convergent Algorithms

|  |  |  |  |
| --- | --- | --- | --- |
| Source to Multiple Destinations | Dijkstra Algorithm | Bellman Ford Algorithm | Floyd Warshall Algorithm |
| 1 -> 10 | 67 | 67 | 67 |
| 10 -> 14 | 383 | 383 | 383 |
| 14 -> 23 | 389 | 389 | 389 |
| 23 ->27 | 1494 | 1494 | 1494 |
| Total Cost For Multiple Destination | **2333** | **2333** | **2333** |

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Dijkstra | Bellman Ford | Floyd Warshall | Park & Keum | Park & Choi | Ahn & Ramakrishna | Ali & Kamoun |
| Total Metric Cost For Multiple Destination | **2333** | **2333** | **2333** | **2333** | **2333** | **2333** | − |