**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**-> 2-> **3**-> 8 -> **12** -> 8 -> **9** -> 12 -> **17** | **2748** |
| Park & Choi | **1**-> 2->  **3**-> 8 -> **12** ->  **9** -> 12 -> **17** | **3137** |
| Ahn & Ramakrishna | **1**-> 2-> **3**-> 8 -> **12** -> **9** -> 12 -> **17** | **3137** |
| Ali & Kamoun | **1**-> 2-> **3**-> 8 -> **12** -> **9** -> 12 -> **17** | **3137** |

Non-Neural Convergent Algorithms

|  |  |  |  |
| --- | --- | --- | --- |
| Source to Multiple Destinations | Dijkstra Algorithm | Bellman Ford Algorithm | Floyd Warshall Algorithm |
| 1 -> 3 | 676 | 843 | 676 |
| 3 -> 12 | 721 | 721 | 721 |
| 12 -> 9 | 366 | 1061 | 366 |
| 9 ->1 | 373 | 373 | 373 |
| Total Cost For Multiple Destination | **2136** | **2998** | **2136** |

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 | **2136** | **2998** | **2136** | **2748** | **3137** | **3137** | **3137** |