**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**-> 6-> **13**-> 18 -> **29** -> 32 -> **35** -> 36 -> **37** | **4221** |
| Park & Choi | **1**-> 6-> **13**-> 18 -> **29** -> 32 -> **35** -> 36 -> **37** | **4221** |
| Ahn & Ramakrishna | **1**-> 6-> **13**-> 18 -> **29** -> 32 -> **35** -> 36 -> **37** | **4221** |
| Ali & Kamoun | **1**-> 6-> **1**3-> 18 -> 23 -> 27 -> 28 -> **29** -> 32 -> **35** -> 39 -> 40 -> **37** | **7341** |

Non-Neural Convergent Algorithms

|  |  |  |  |
| --- | --- | --- | --- |
| Source to Multiple Destinations | Dijkstra Algorithm | Bellman Ford Algorithm | Floyd Warshall Algorithm |
| 1 -> 13 | 1237 | 1237 | 1237 |
| 13 -> 29 | 599 | 599 | 599 |
| 29 -> 35 | 827 | 827 | 827 |
| 35 ->37 | 528 | 1191 | 528 |
| Total Cost For Multiple Destination | **3191** | **3854** | **3191** |

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 | **3191** | **3854** | **3191** | **4221** | **4221** | **4221** | **7341** |