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| **Hybrid Algorithm Tests** | | | |
| **Results of Genetic with memetic + Simulated Annealing** | | | |
|  | First Trial | Second Trial | Third Trial |
| Mutation Type = Swap  Mutation Rate = 0.01  Crossover Type = One Point  Crossover Rate = 0.70  Selection Type = Roulette wheel  Generations = 100  Population Size = 30  Memetic Rate = 0.20  Initial Temperature= 1000  Cooling Rate= 0.95  SA iterations= 30  Data = All data | Start Fitness = 21800  Best Fitness = 6700 | Start Fitness = 21600  Best Fitness = 6500 | Start Fitness = 21000  Best Fitness = 6200 |
| Mutation Type = Scramble  Mutation Rate = 0.01  Crossover Type = Two point  Crossover Rate = 0.70  Selection Type = Tournament  Generations = 100  Population Size = 50  Memetic Rate=0.20  Initial Temperature= 1000.0  Cooling Rate=0.95  SA iterations=50  Data = All data | Start Fitness = 21100  Best Fitness = 4100 | Start Fitness = 21700  Best Fitness = 3600 | Start Fitness = 21300  Best Fitness = 3900 |
| Mutation Type = Scramble  Mutation Rate = 0.01  Crossover Type = Two point  Crossover Rate = 0.70  Selection Type = Rank  Generations = 150  Population Size = 150  Memetic Rate=0.20  Initial Temperature= 1100.0  Cooling Rate=0.95  SA iterations=150  Data = All data | Start Fitness = 18900  Best Fitness = | Start Fitness =  Best Fitness = | Start Fitness =  Best Fitness = |
| Mutation Type = swap  Mutation Rate = 0.05  Crossover Type = Two Point  Crossover Rate = 0.8  Selection Type = Tournament  Generations = 150  Population Size = 120  Memetic Rate=0.5  Initial Temperature= 5000  Cooling Rate= 0.97  SA iterations= 150  Data = All data | Start Fitness = 21100  Best Fitness = | Start Fitness =  Best Fitness = | Start Fitness =  Best Fitness = |