

| Dimensions | Threshold max gap | fold change |
|------------|-------------------|-------------|
| 5 | 122 | 227.3405 |
| 10 | 151 | 39.0570 |
| 15 | 153 | 35.0167 |
| 20 | 153 | 34.4680 |
| 25 | 148 | 27.9837 |
| 30 | 160 | 30.6777 |
| 35 | 128 | 101.9536 |
| 40 | 140 | 36.7628 |
| 45 | 139 | 39.2452 |
| 50 | 147 | 24.3221 |
| 55 | 125 | 147.9133 |
| 60 | 123 | 165.325 |
| 65 | 125 | 149.7192 |
| 70 | 118 | 352.4266 |
| 75 | 125 | 144.0012 |
| 80 | 134 | 57.8595 |
| 85 | 124 | 154.1030 |
| 90 | 130 | 73.9996 |
| 95 | 124 | 145.2467 |
| 100 | 136 | 43.5962 |

Figure 1: Small Data Set

| Dimensions | Max cost Threshold | Threshold max gap | fold change ($\mu = 4.25353$) |
|------------|--------------------|-------------------|---------------------------------|
| 5 | 78 | 78 | 4.9265 |
| 10 | 107 | 107 | 6.5309 |
| 15 | 92 | 92 | 3.9525 |
| 20 | 84 | 84 | 3.6639 |
| 25 | 90 | 90 | 3.6681 |
| 30 | 96 | 96 | 4.2508 |
| 35 | 98 | 97 | 4.6519 |
| 40 | 87 | 87 | 3.8082 |
| 45 | 93 | 93 | 4.1851 |
| 50 | 89 | 89 | 3.7935 |
| 55 | 90 | 90 | 3.8843 |
| 60 | 95 | 95 | 4.3252 |
| 65 | 91 | 91 | 3.8819 |
| 70 | 91 | 91 | 3.9391 |
| 75 | 94 | 94 | 4.1228 |
| 80 | 101 | 101 | 4.2029 |
| 85 | 91 | 91 | 4.0458 |
| 90 | 100 | 100 | 4.3406 |
| 95 | 93 | 93 | 3.9544 |
| 100 | 106 | 106 | 4.9422 |

Figure 2: Big Data Set