|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Percent | crossover | accuracy | F1 | precision | recall |
| 30% | SBX | 94.02 | 94.1 | 94.56 | 93.92 |
| 50% | SBX | 93.67 | 93.2 | 92.11 | 94.34 |
| 70% | SBX | 92.6 | 92.8 | 92.4 | 93.2 |
| 30% | Single Point |  |  |  |  |
| 50% | Singe Point | 93.00 | 93.16 | 92.65 | 93.69 |
| 70% | Singe Point | 92.7 | 93.12 | 92.83 | 93.81 |
| 30% | Two point crossover | 93.69 | 93.85 | 93.12 | 94.59 |
| 50% | Two Point Crossover | 92.88 | 92.91 | 92.93 | 94.06 |
| 70% | Two point crossover |  |  |  |  |
| 30% | Arithmetic Crossover | 93.66 | 93.82 | 93.52 | 94.11 |
| 50% | Arithmetic Crossover | 93.11 | 93.33 | 93.13 | 93.93 |
| 70% | Arithmetic Crossover | 92.65 | 92.84 | 91.22 | 93.81 |

Whale

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Percent | crossover | accuracy | F1 | precision | recall |
| 30% | SBX | 94.67 | 94.6 | 95.21 | 94.14 |
| 50% | SBX | 94.12 | 94.21 | 93.69 | 93.88 |
| 70% | SBX | 93.92 | 94.06 | 93.54 | 94.59 |
| 30% | Single Point |  |  |  |  |
| 50% | Singe Point |  |  |  |  |
| 70% | Singe Point |  |  |  |  |
| 30% | Two point crossover |  |  |  |  |
| 50% | Two Point Crossover |  |  |  |  |
| 70% | Two point crossover |  |  |  |  |
| 30% | Arithmetic Crossover |  |  |  |  |
| 50% | Arithmetic Crossover |  |  |  |  |
| 70% | Arithmetic Crossover | 93.57 | 93.72 | 93.30 | 94.14 |