Pre-attacco

Accuracy = 0.99

Loss = 0.023

Post-attacco

CR = 1 F = (0.5,1)

Iterazioni 50 popolazione 400

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.107 |
| 10 | 0.76 | 0.45 |
| 20 | 0.64 | 0.666 |
| 30 | 0.54 | 0.813 |
| 50 | 0.37 | 1.149 |

Iterazioni 50 popolazione 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.106 |
| 10 | 0.67 | 0.458 |
| 20 | 0.53 | 0.642 |
| 30 | 0.49 | 0.804 |
| 50 | 0.38 | 1.07 |

Iterazioni 50 popolazione 1000

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.11 |
| 10 | 0.75 | 0.473 |
| 20 | 0.63 | 0.698 |
| 30 | 0.42 | 1.135 |
| 50 | 0.36 | 1.25 |

Iterazioni 100 popolazione 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.106 |
| 10 | 0.5 | 0.645 |
| 20 | 0.39 | 0.77 |
| 30 | 0.23 | 1.01 |
| 50 | 0.18 | 1.307 |

Iterazioni 100 popolazione 400

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.11 |
| 10 | 0.57 | 0.621 |
| 20 | 0.5 | 0.709 |
| 30 | 0.44 | 0.925 |
| 50 | 0.29 | 1.315 |

Iterazioni 100 popolazione 1000

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.11 |
| 10 | 0.57 | 0.616 |
| 20 | 0.51 | 0.866 |
| 30 | 0.44 | 0.977 |
| 50 | 0.3 | 1.33 |

Si decide di procedere con un numero di it pari a 100 e popolazione pari a 100 individui

CR = 0.75 F = (0.5,1) Iterazioni = 100 Pop = 100

Iterazioni 100 popolazione 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.098 |
| 10 | 0.7 | 0.5 |
| 20 | 0.63 | 0.603 |
| 30 | 0.58 | 0.793 |
| 50 | 0.38 | 1.125 |

CR = 0.5 F = (0.5,1) Iterazioni = 100 Pop = 100

Iterazioni 100 popolazione 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.101 |
| 10 | 0.73 | 0.447 |
| 20 | 0.62 | 0.632 |
| 30 | 0.48 | 0.802 |
| 50 | 0.31 | 1.155 |

CR = 0.25 F = (0.5,1) Iterazioni = 100 Pop = 100

Iterazioni 100 popolazione 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.097 |
| 10 | 0.63 | 0.557 |
| 20 | 0.51 | 0.704 |
| 30 | 0.36 | 0.864 |
| 50 | 0.23 | 1.208 |

CR = 0 F = (0.5,1) Iterazioni = 100 Pop = 100

Iterazioni 100 popolazione 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.106 |
| 10 | 0.68 | 0.467 |
| 20 | 0.55 | 0.601 |
| 30 | 0.44 | 0.748 |
| 50 | 0.3 | 0.999 |

Fissato il parametro CR = 1 si ottengono i migliori risultati.

Esaminiamo le prestazioni variando il valore del parametro di mutazione F.

CR = 1 F = 1.5 Iterazioni = 100 Pop = 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.104 |
| 10 | 0.88 | 0.288 |
| 20 | 0.82 | 0.421 |
| 30 | 0.71 | 0.582 |
| 50 | 0.51 | 0.917 |

CR = 1 F = 1 Iterazioni = 100 Pop = 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.105 |
| 10 | 0.84 | 0.302 |
| 20 | 0.83 | 0.407 |
| 30 | 0.66 | 0.602 |
| 50 | 0.47 | 0.976 |

CR = 1 F = 0.5 Iterazioni = 100 Pop = 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.106 |
| 10 | 0.55 | 0.593 |
| 20 | 0.37 | 0.823 |
| 30 | 0.15 | 1.105 |
| 50 | 0.0 | 1.427 |

CR = 1 F = 0 Iterazioni = 100 Pop = 100

|  |  |  |
| --- | --- | --- |
| Pixels | Accuracy | Loss |
| 1 | 0.93 | 0.104 |
| 10 | 0.57 | 0.595 |
| 20 | 0.33 | 0.871 |
| 30 | 0.13 | 1.126 |
| 50 | 0.01 | 1.446 |