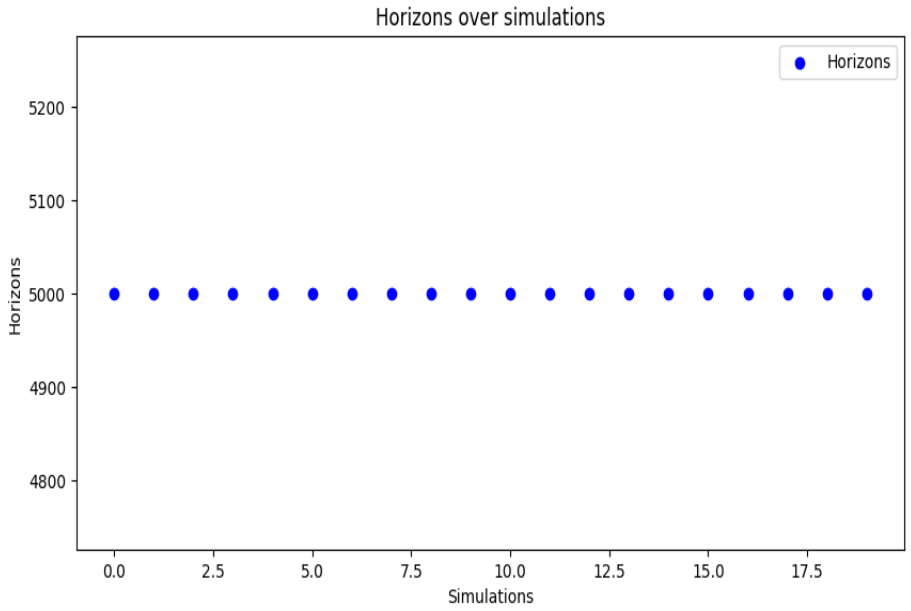
# Test done 2025_04_23 at 12_42_17

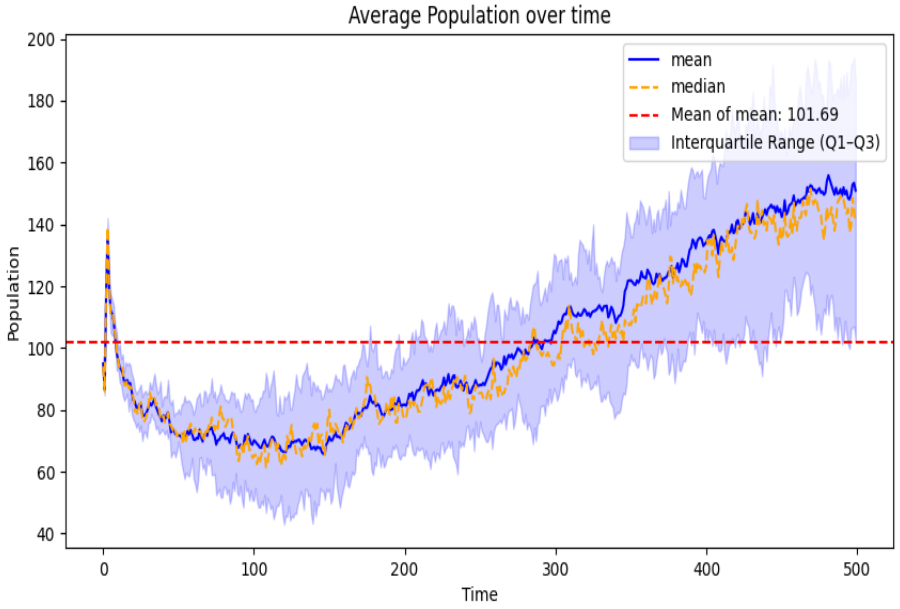
Number of simulation done : 20. The window time of the simulation is 10

## Initial condition

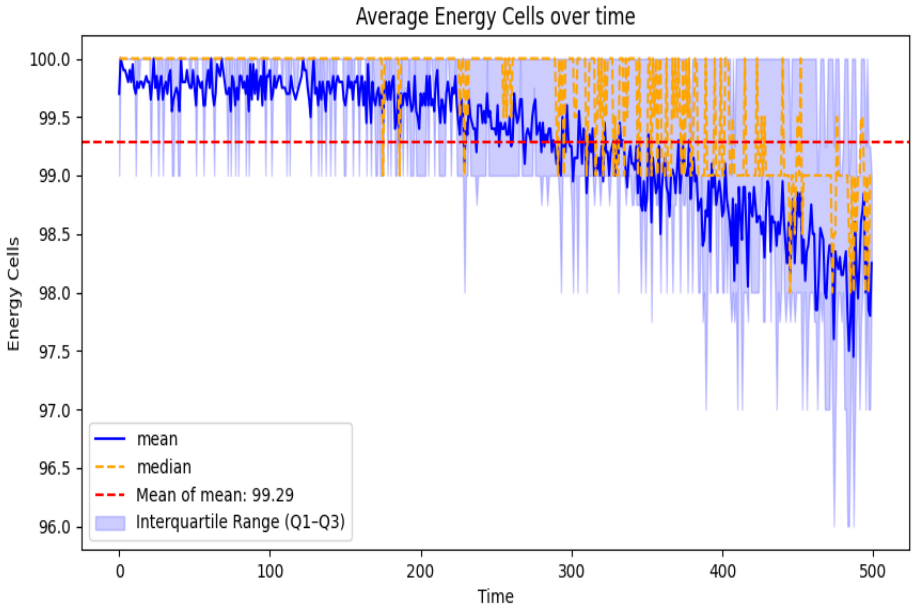
Size : 100
I_Energy : 120
I_Age : 120
I_Maturity : 25
I_Distr : Uniform
Radius : 5
Active : 100
C_Min : 30
C_Max : 150
C_Regen : 15
C_Distr : Uniform
Height : 100
Width : 100
P_Distr : Uniform
Move : 1
Eat : 0
Rest : 0
Reproduce : 15
N_Simulations : 20
Seed : 1
Energy Needed : 0.6
Extra Energy : 0.2
Energy Requeste : 0.5
Mutation Rate : 0.1



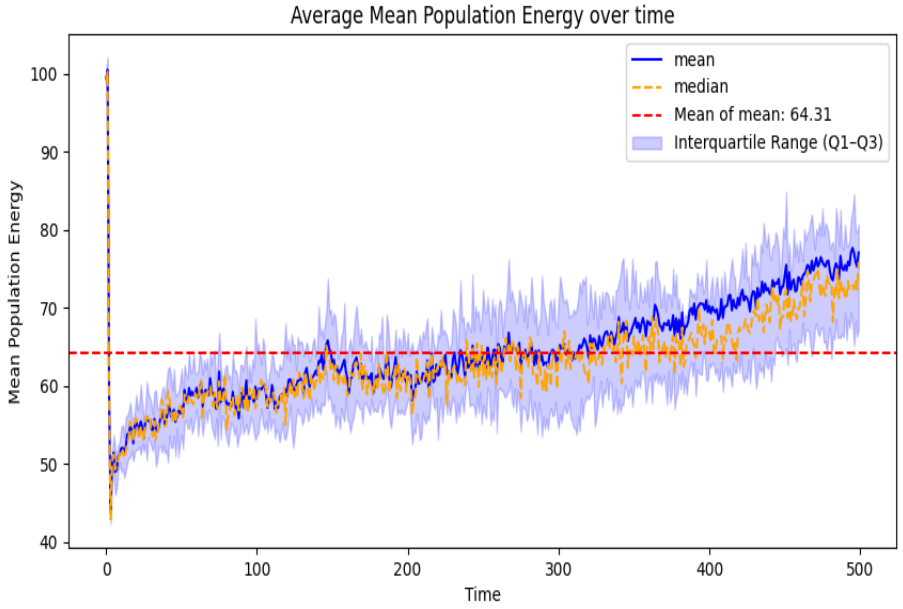

Mean : 5001.0
Variance : 0.0



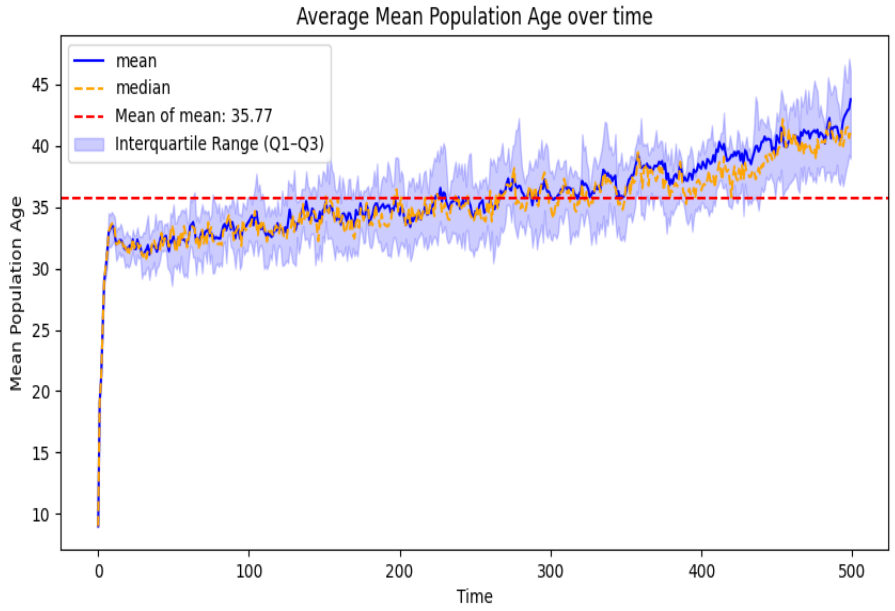

Mean : 101.69170000000001
Variance : 778.0593761099998



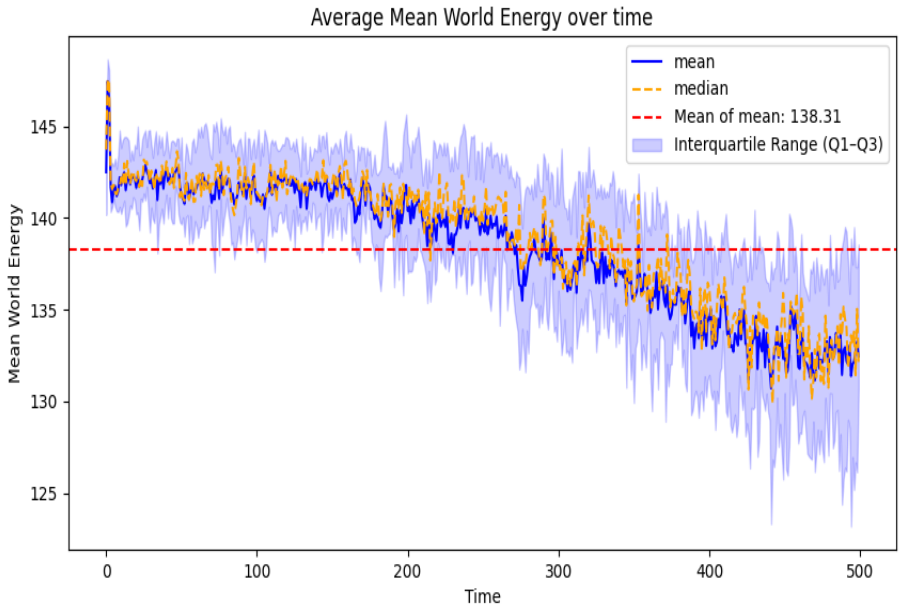

Mean : 99.2861
Variance : 0.3002517899999999



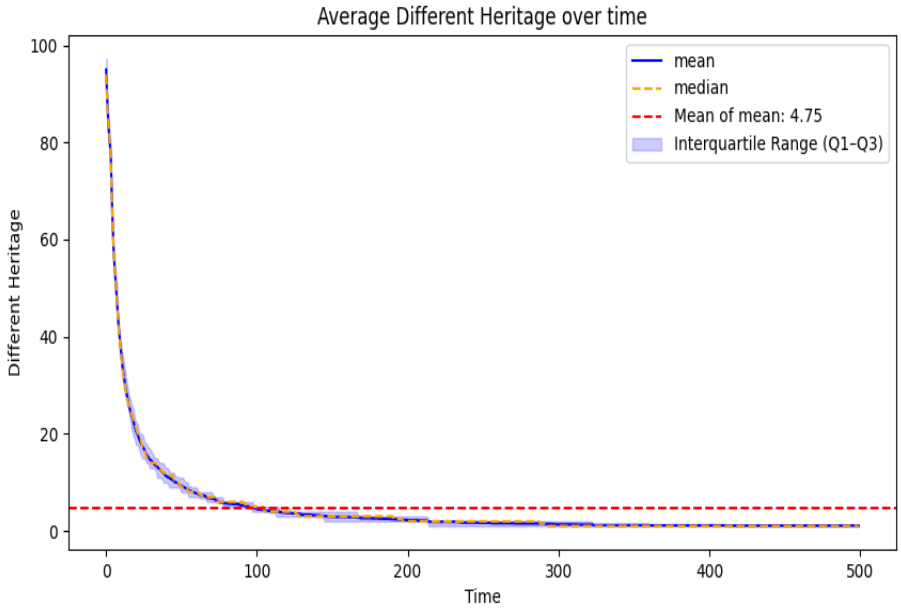

Mean : 64.31493277486445
Variance : 41.18788633769319




Mean : 35.77450626446312
Variance : 10.62023608021961

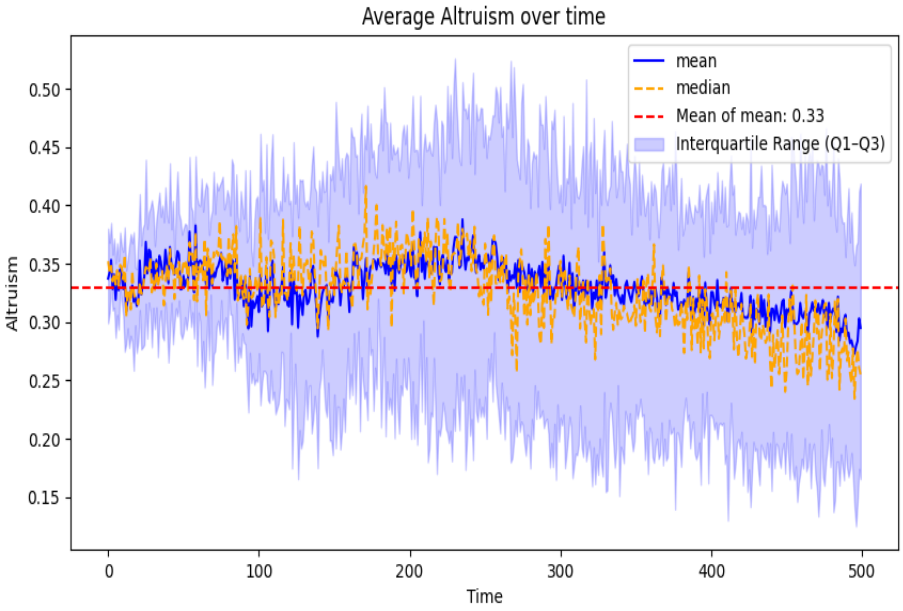



Mean : 138.3145494273411
Variance : 12.098575724439211

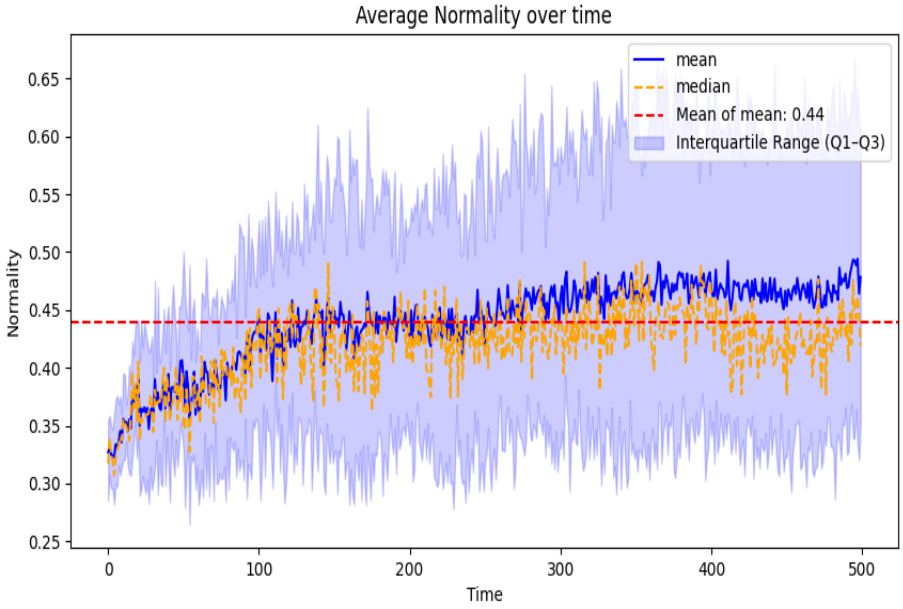



Mean : 4.7537
Variance : 103.10808131

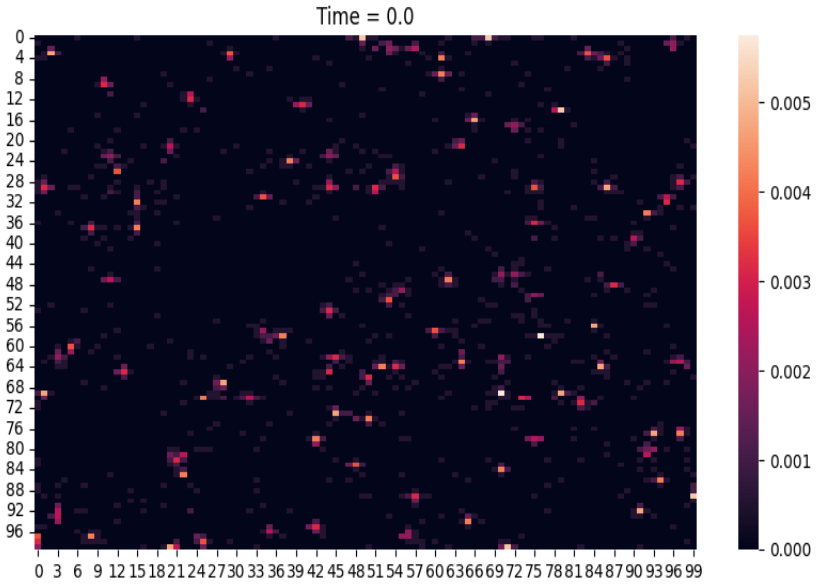

Mean : 0.23100206701609893
Variance : 0.0009993134230297162

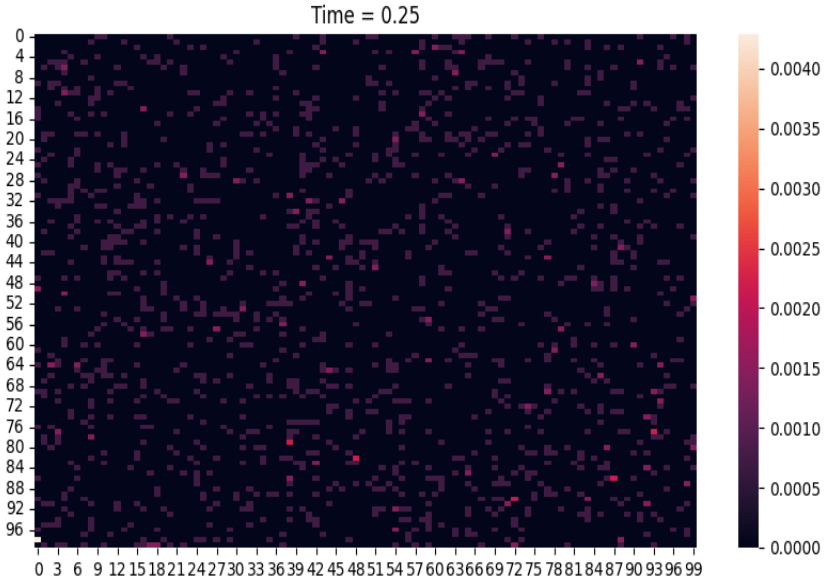


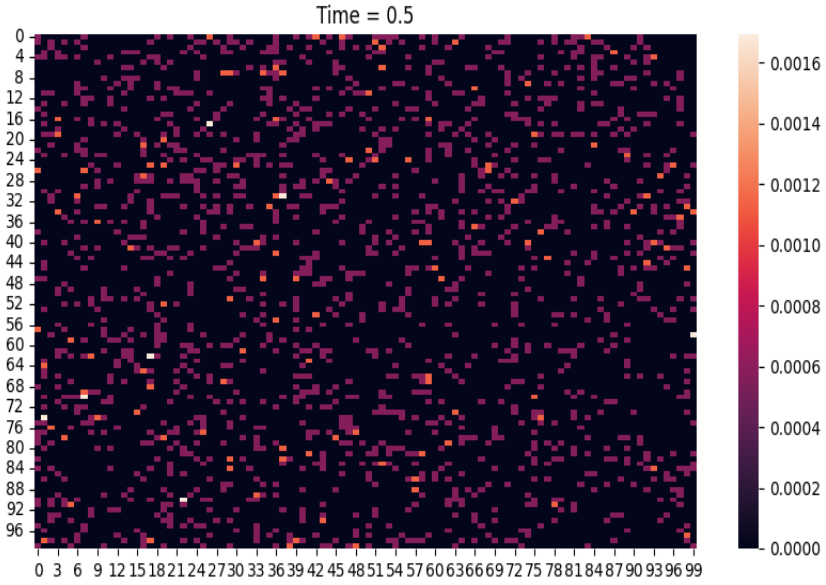

Mean : 0.32999678696270834
Variance : 0.0003867898699499841

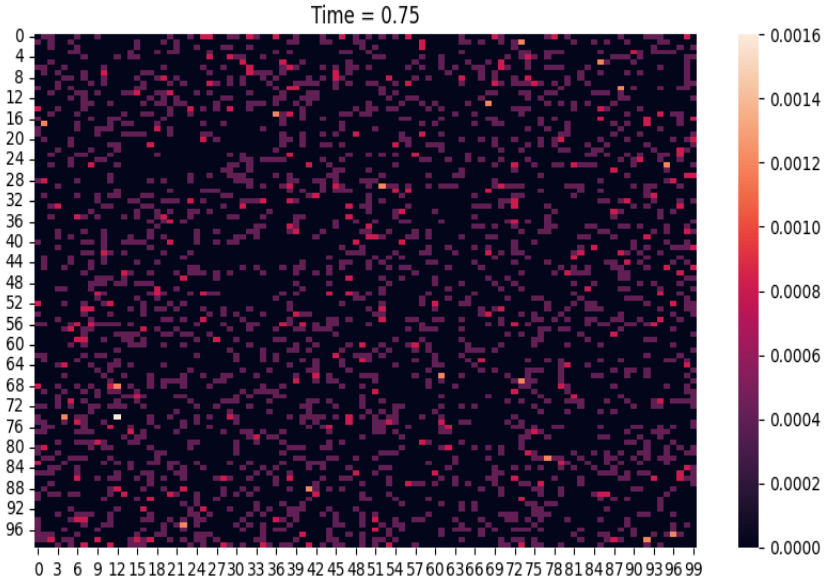


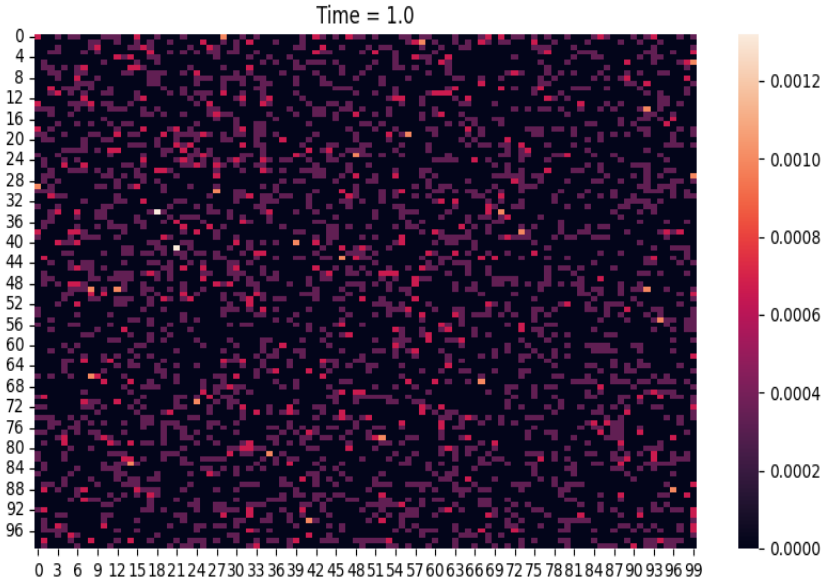

Mean : 0.4390011460211927
Variance : 0.0013142828366834282
Spatial Distribution Density Heatmap




Time = 0.25
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96
0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78 81 84 87 90 93 96 99
0.0040
0.0035
0.0030
0.0025
0.0020
0.0015
0.0010
0.0005
0.0000


Time = 0.5
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92 96
0 3 6 9 12 15 18 21 24 27 30 33 36 39 42 45 48 51 54 57 60 63 66 69 72 75 78 81 84 87 90 93 96 99
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
0.0004
0.0002
0.0000

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Year : 2024/2025
This Project is done for the academic purpose of implementing the practical part of the Degree Thesis in Artificial Intelligence and Data Analytics.