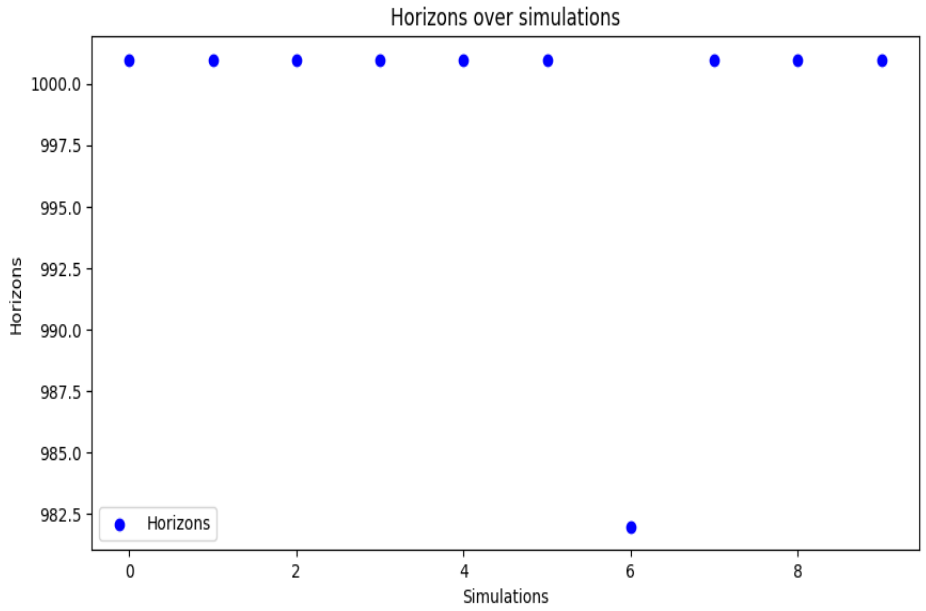
# Test done 2025_04_22 at 14_18_21

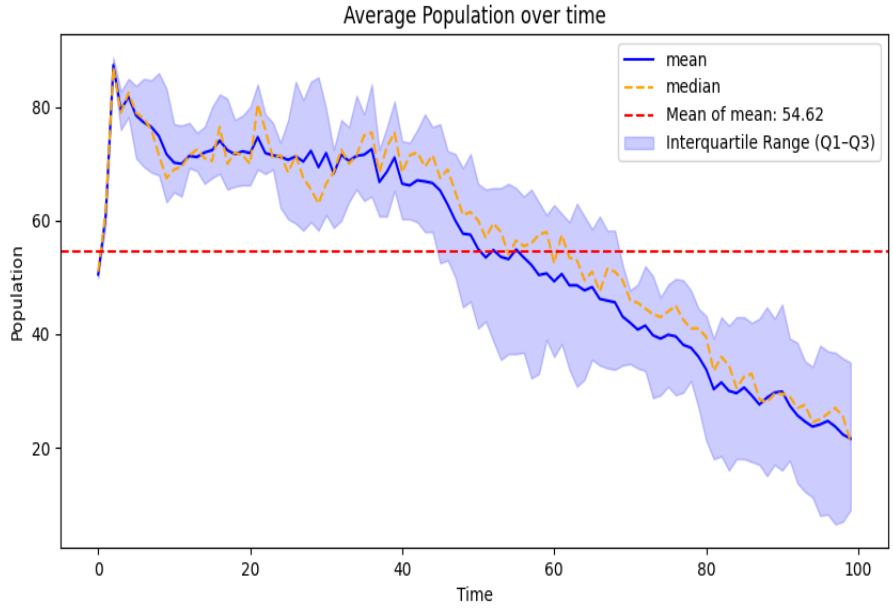
Number of simulation done : 10. The window time of the simulation is 10

## Initial condition

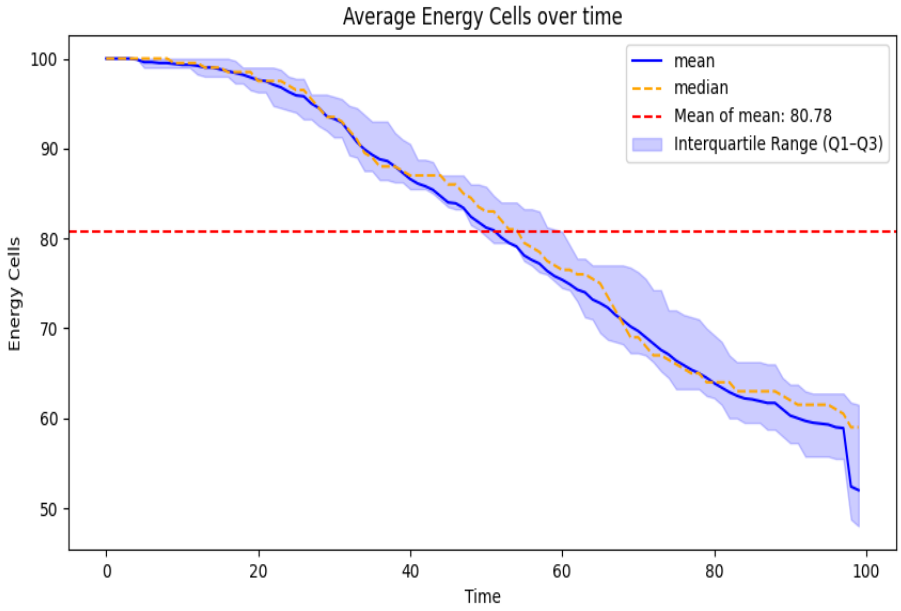
Size : 51
I_Energy : 100
I_Age : 100
I_Maturity : 18
I_Distr : Uniform
Radius : 4
Active : 100
C_Min : 10
C_Max : 150
C_Regen : 20
C_Distr : Uniform no regen
Height : 100
Width : 100
P_Distr : Uniform
Move : 1
Eat : 1
Rest : 0
Reproduce : 15
N_Simulations : 10
Seed : 45
Energy Needed : 0.6
Extra Energy : 0.2
Energy Requeste : 0.5
Mutation Rate : 0.1



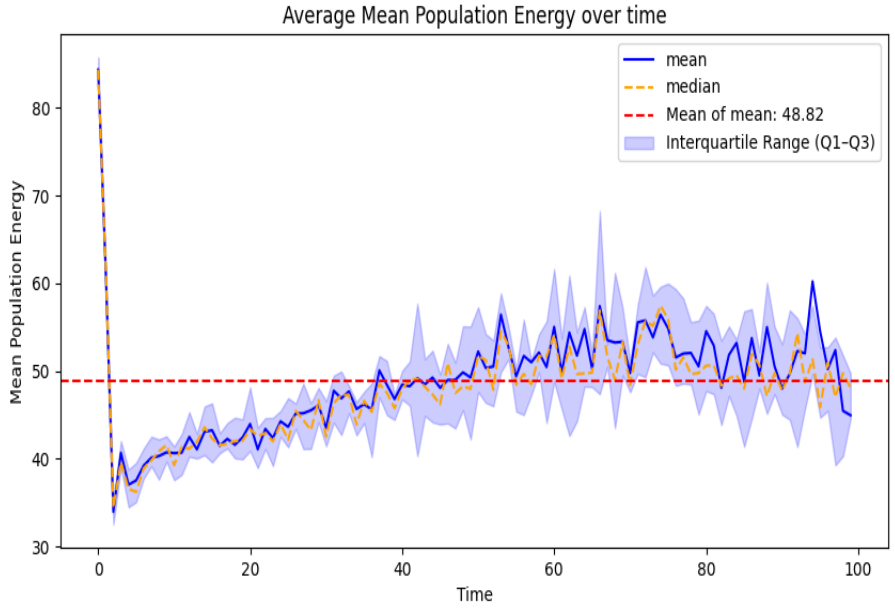

Mean : 999.1
Variance : 32.489999999999995



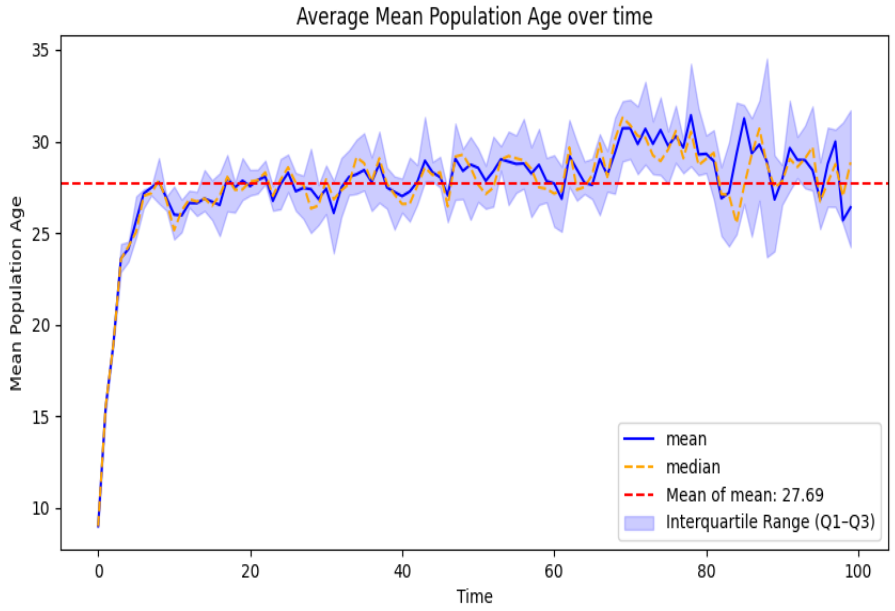

Mean : 54.62000000000001
Variance : 320.0927999999999



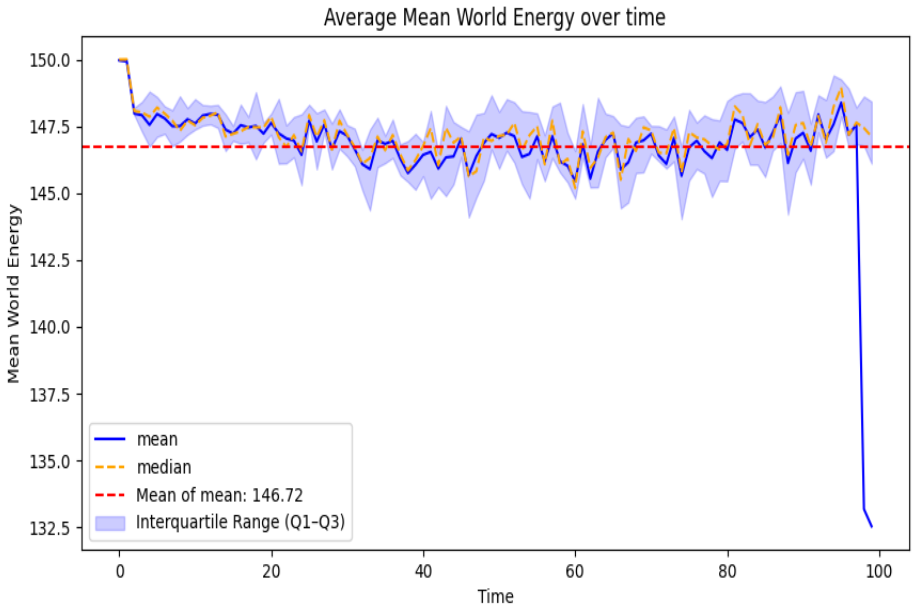

Mean : 80.78099999999999
Variance : 215.67993899999993



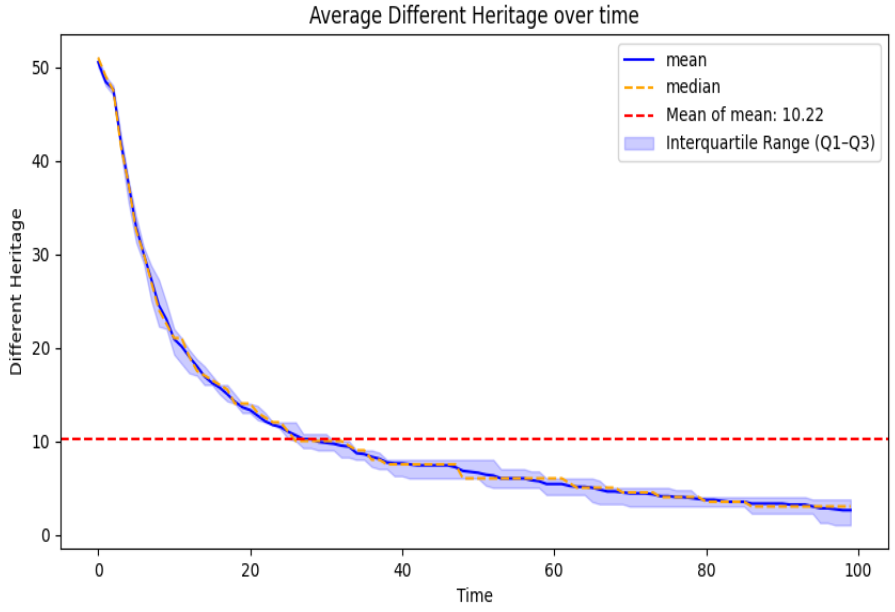

Mean : 48.82434643633598
Variance : 40.706565227727694



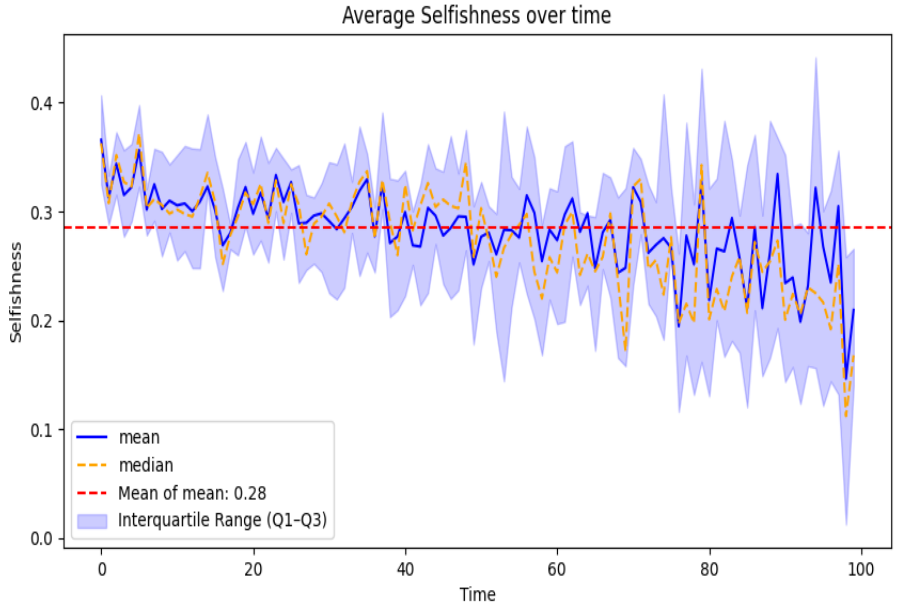

Mean : 27.691701903345844
Variance : 7.7771344369862945



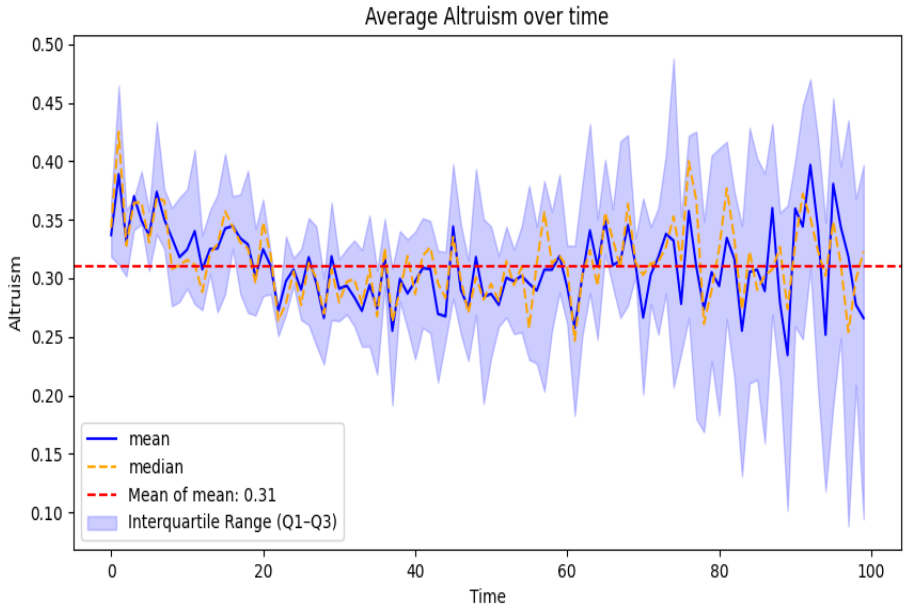

Mean : 146.72331163146245
Variance : 4.509730786011767



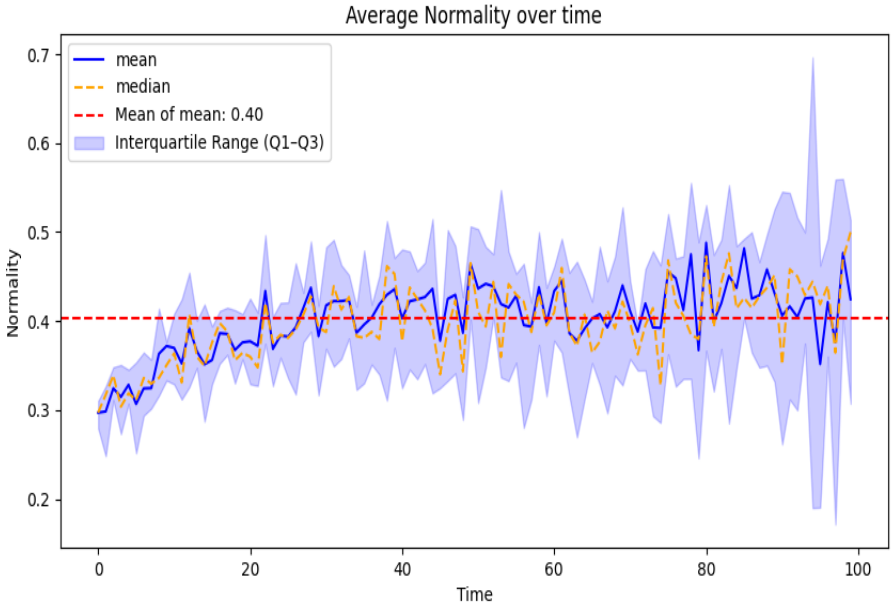

Mean : 10.22
Variance : 102.49479999999998



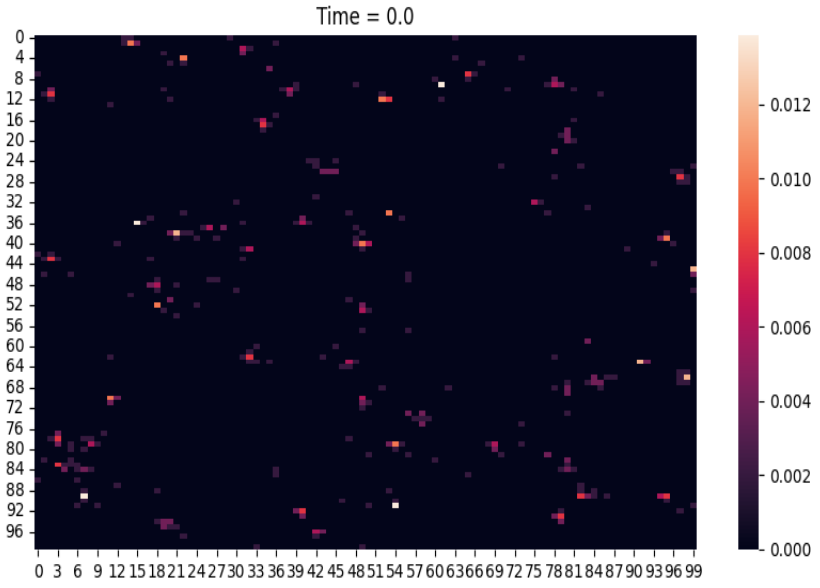

Mean : 0.2847730107390997
Variance : 0.0012842975685354403

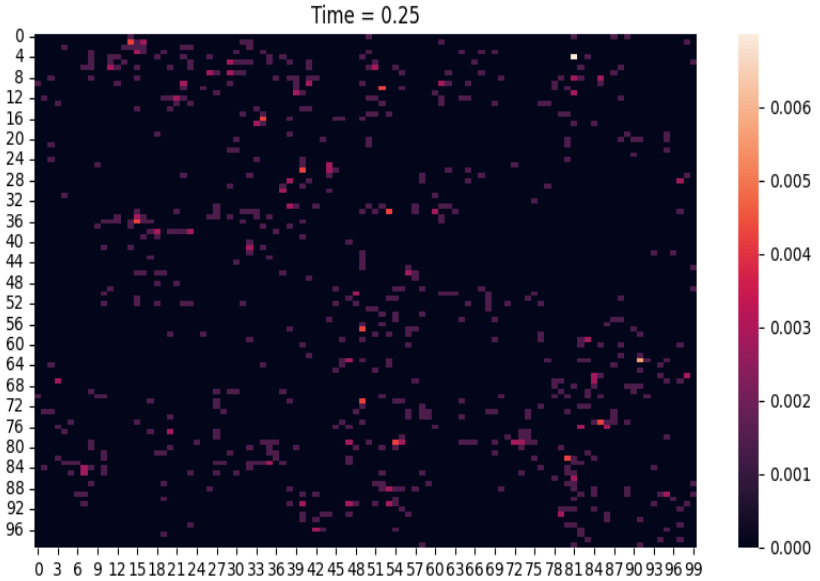


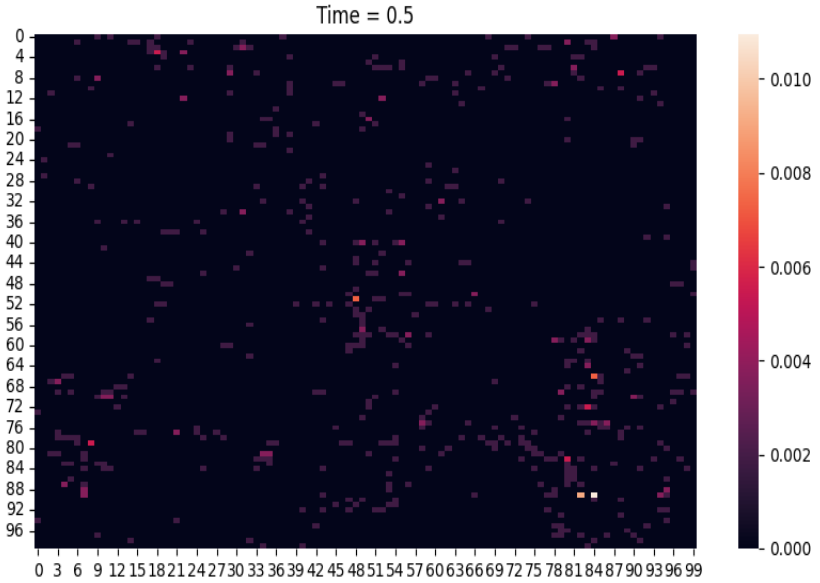

Mean : 0.3105669323662049
Variance : 0.0009993164504537636

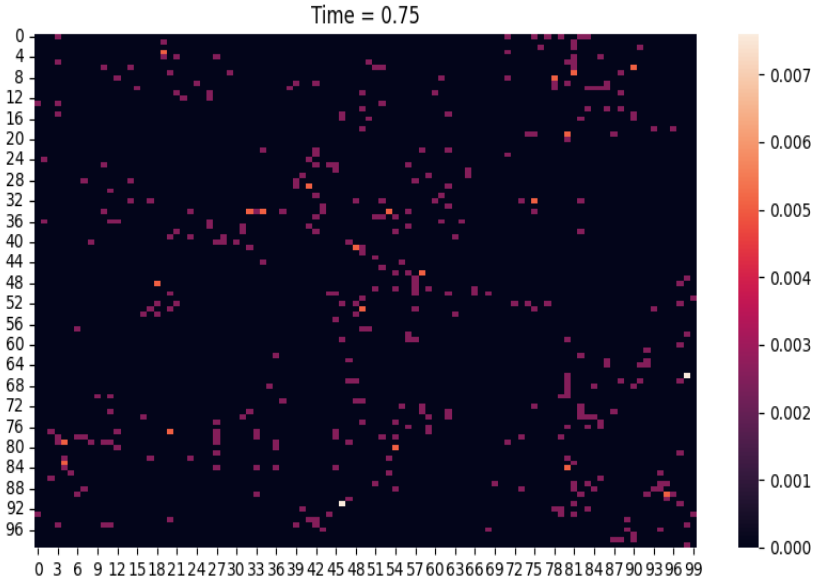


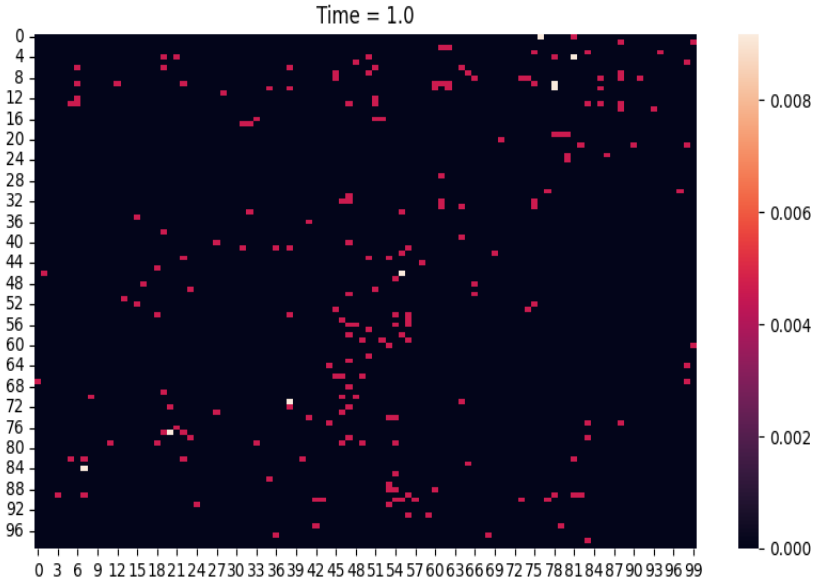

Mean : 0.40266005689469553
Variance : 0.0015367713550049533
Spatial Distribution Density Heatmap




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
0.006
0.005
0.004
0.003
0.002
0.001
0.000


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
0.010
0.008
0.006
0.004
0.002
0.000

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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.