

For Experiments by changing both Local Area density and Potential Radius here are the results.

Considering Both Micro and Macro results over 50 different experiments for Potential Radius 1,10,20,30 & 40, overall, the Potential Radius 20 Had the best experiments. By increasing the local area density both Micro and Macro similarity increases. The best results happened at low Local area density. Among experiments with variable Local Area densities from 0.1 to 1, local Area density 0.1 was more desired.

After of that I run 10 experiments with Local Area Density from 0.01 to 0.1. considering both Micro and Macro Similarity and the Correlation results of the prediction code 0.03 had the best results.

Here is more discussion over the results:

- In experiment with Potential Radius 1. For Local Area Density 0.1, Micro similarity is 60% which is a good result.
- In experiment with Potential Radius 10 and Local area density 0.9 some Macro Correlation had higher similarity than Micro correlation, so it's not considered as a proper config.
- In experiment with Potential Radius 20 after experiments with Local Area density 0.7 and above we had Macro correlation more than Micro correlation which is not desired.
- In experiment with Potential Radius 30 except Local area density 0.9 all the other experiment results were desired.
- In experiment with Potential Radius 40 with Local Area density 0.3 and upper than that, Macro similarity results starts to be higher than Micro similarity which is not correct. But still the Micro similarity is very low. Around 40% for Local area density 0.2 which is not enough.