

## Observations and Improvement Recommendations

**1. Could the code be made more efficient? A literal interpretation of the instructions above is not necessary.**

- Initial program was not filtering based on neighbourhood radius and was updating the entire board
- Program could be made more efficient by updating weights within the neighbourhood radius. This also gives us well defined boundaries which might serve the purpose better

**2. Is the code best structured for later use by other developers and in anticipation of productionisation?**

- No
- Variable names are special characters
- Tough to follow the code and mathematical calculations and their relevance in the original code.

**3. How would you approach productionising this application?**

- Give meaningful/descriptive variable names
- Create functions for distance, influence, learning rate and neighbour radius
- **Optional:** Create a Class that trains and returns output weights based on given input. Each instance of the class is initialised for a given max iteration count and map dimensions

**4. Anything else you think is relevant.**

- Only good up to 1000 iterations, 100x100 map and 100 rows of data. Anything beyond takes too long.
- Experimentation with learning rate, radius and influence, time constant exponents needed
- Parallelization?