

### Assignment 3: Group Size Detection

#### Values of P and R that produces the best estimate

- For Estimated Value of M: 100, (R,P) pairs:
  - 0, 0.21
  - 0, 0.22
  - 0, 0.23
  - 0, 0.24
  - 0, 0.25
  - 1, 0.21
  - 1, 0.22
  - 1, 0.23
  - 1, 0.24
  - 1, 0.25
  - 2, 0.15
  - 2, 0.16
  - 3, 0.12
  - 4, 0.1
  - 5, 0.08
  - 6, 0.07
  - 7, 0.06
  - 9, 0.05

#### Does it matter if we use 4-distance or 8-distance?

- 4 distance: 33 versions reached the size estimation of 100
- 8 distance: 16 versions reached the size estimation of 100

As the neighbors nearby are increased for flashing check, the accuracy of the current rudimentary algorithm reduces.

#### Possible Improvement in the Algorithm

- Improve the response of grid by iterating through all neighbors to make immediate change rather than waiting for the next iteration to happen.