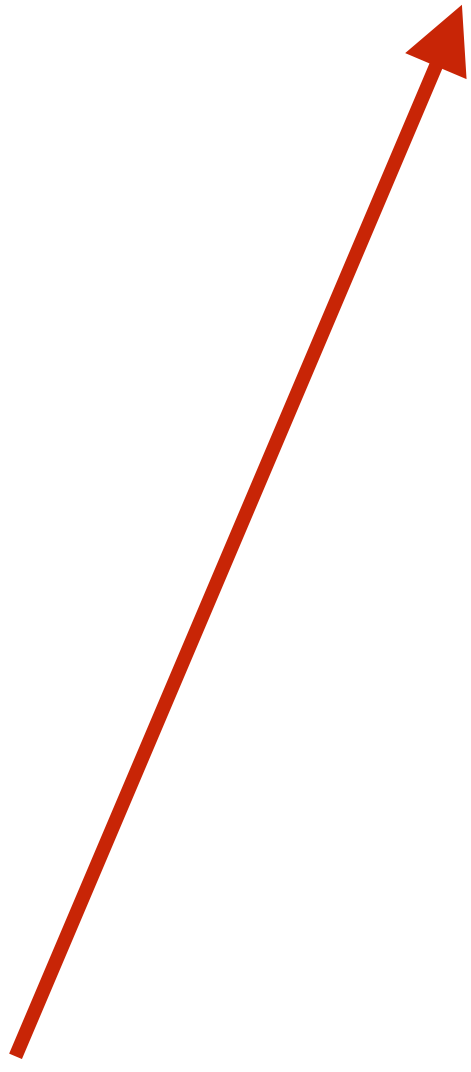
Moran's I

$$I = \frac{N}{\sum_{i,j=1}^{N} w_{ij}} * \frac{\sum_{i=1}^{N} \sum_{j=1}^{N} w_{ij}(x_i - \bar{x})(x_j - \bar{x})}{\sum_{i=1}^{N} (x_i - \bar{x})^2}$$



Distance weights

Deviations of Observations

$$-1 <= I <= 1$$

Moran's I

Deviations of Observations

$$I = \frac{N}{\sum_{i,j=1}^{N} w_{ij}} * \frac{\sum_{i=1}^{N}\sum_{j=1}^{N} w_{ij}(x_i - \bar{x})(x_j - \bar{x})}{\sum_{i=1}^{N}(x_i - \bar{x})^2}$$

Distance weights

$$-1 <= I <= 1$$

Distance Bins

- Correlation of observations is estimated within defined ‘bins’ of distances (also called ‘lags’).
- Probability is ascertained via permutation.
- By default, Moran’s I is based upon a Moore Neighborhood