**Final Assignment Analysis of Spatiotemporal Data Alexander Pilz**

**Datasets**

Wind turbines in NRW (https://open.nrw/dataset/2dd18cf8-edc7-4e7f-8424-c4c72feb437f )

Administrative divisions NRW (https://www.opengeodata.nrw.de/produkte/geobasis/vkg/dvg/dvg2/)

Potential energy yields für NRW (https://open.nrw/dataset/90d3b49c-842d-4768-b247-5534a5da2e30)

**Hypothesis**

H0 I: The distribution of wind turbines in NRW is the result of a completely random process (CRP).

Ha1 I: The distribution of wind turbines in NRW is dispersed.

Ha2 I: The distribution of wind turbines in NRW is clustered.

H0 II: The distribution of wind turbines in NRW is not influenced by the potential energy yields.

Ha1 II: The distribution of wind turbines in NRW is influenced by the potential energy yields.

H0 III: The distribution of wind turbines in NRW does not differ in different administrative areas.

Ha1 III: The distribution of wind turbines in NRW does differ in different administrative areas.

**Methods**

Absolute counts per administrative area (Bezirke)

Global distribution

F-Function

G-Function

K-Function

L-Function

Local distribution with tessellated covariate (potential power yields)

Correlation between potential energy yield and number of wind turbines

Compare key metrics of administrative areas (Bezirke)