HGO4940 Spring 2024 Reading List

Andreas Forø Tollefsen

Main books:

Comber, L., & Brunsdon, C. (2020). Geographical data science and spatial data analysis: an introduction in R. Sage.

Supplementary online resources:

Walker, K. (2023). *Analyzing us census data: Methods, maps, and models in R*. CRC Press. Open-Source available online: https://walker-data.com/census-r/index.html

W. N. Venables, D. M. Smith, R Core Team (2017). An Introduction to R. http://colinfay.me/intro-to-r/

Wickham, H., Mine Çetinkaya-Rundel & Grolemund, G. (2023). R for data science: import, tidy, transform, visualize, and model data. O'Reilly Media, Inc. https://r4ds.hadley.nz/

Lecture 1: Introduction to Spatial Data Analysis using R

Anselin, L., & Getis, A. (1992). Spatial statistical analysis and geographic information systems. The Annals of Regional Science, 26, 19-33.

Lecture 2: Spatial Data is Special Data

Goodchild, M. F. (2011). Scale in GIS: An overview. Geomorphology, 130(1-2), 5-9.

Lecture 3: Advanced Spatial Data Visualization

Mennis, J. (2009). Dasymetric mapping for estimating population in small areas. Geography Compass, 3(2), 727-745.

Lecture 4: Spatial Neighbors and Interactions

Neumayer, E., & Plümper, T. (2016). W. *Political Science Research and Methods*, 4(1), 175-193. doi:10.1017/psrm.2014.40

Lecture 5: Spatial Autocorrelation

Getis, A. (2009). Spatial autocorrelation. In Handbook of applied spatial analysis: Software tools, methods and applications (pp. 255-278). Berlin, Heidelberg: Springer Berlin Heidelberg.

Lecture 6: Spatial Regression Models

LeSage, J. (2015). Spatial econometrics. In Handbook of research methods and applications in economic geography (pp. 23-40). Edward Elgar Publishing.
https://www.elgaronline.com/display/edcoll/9780857932662/9780857932662.00007.xml

Ward, M. D., & Gleditsch, K. S. (2018). Spatial regression models (Vol. 155). Sage Publications.
https://us.sagepub.com/en-us/nam/spatial-regression-models/book262155

Golgher, A. B., & Voss, P. R. (2016). How to interpret the coefficients of spatial models: Spillovers, direct and indirect effects. Spatial Demography, 4, 175-205.

Lecture 7: Spatial Point Analysis and Interpolation

Andresen, M. A., & Malleson, N. (2011). Testing the stability of crime patterns: Implications for theory and policy. Journal of Research in Crime and Delinquency, 48(1), 58-82.

Comber, A., & Zeng, W. (2019). Spatial interpolation using areal features: A review of methods and opportunities using new forms of data with coded illustrations. Geography Compass, 13(10), e12465.

Lecture 8: Advanced Network Analysis

Zhong, C., Arisona, S. M., Huang, X., Batty, M., & Schmitt, G. (2014). Detecting the dynamics of urban structure through spatial network analysis. International Journal of Geographical Information Science, 28(11), 2178-2199.

Esch, T., Marconcini, M., Marmanis, D., Zeidler, J., Elsayed, S., Metz, A., ... & Dech, S. (2014). Dimensioning urbanization–An advanced procedure for characterizing human settlement properties and patterns using spatial network analysis. Applied Geography, 55, 212-228.

Lecture 9: Harmonizing Spatial Data for Regression Analysis

Schweers, S., Kinder-Kurlanda, K., Müller, S., & Siegers, P. (2016). Conceptualizing a spatial data infrastructure for the social sciences: An example from Germany. Journal of Map & Geography Libraries, 12(1), 100-126.

Tollefsen, A. F., Strand, H., & Buhaug, H. (2012). PRIO-GRID: A unified spatial data structure. Journal of Peace Research, 49(2), 363-374.

Lecture 10: Individual Project Work