In spatial data analysis, you will frequently encounter this problem, especially when using data for irregular spatial units (different area), when there are systematic regional differences in the relationships you model (i.e., spatial regimes), or when there is a continuous spatial drift in the parameters in the model (i.e., spatial expansion). The presence of any of these spatial effects would make a standard regression model that ignores them misspecified.

Spatial Regression Model Prediction. The use of regression models is often restricted to the interpretation of the significance and magnitude of the coefficients of variables of interest. A motivation for using a spatial lag model is to obtain the proper inference on the coefficients of the other covariates in the model. Spatial analysis software is software written to enable and facilitate spatial analysis. Currently, there are several packages, both free software and proprietary software, which cover most of the spatial data infrastructure stack. Comparison of GIS software. Geographic information System. Spatial analysis. Spatial network analysis software. Rey, S. J. Show me the code: Spatial Analysis and Open Source. Further resources may be found in the following links.