**Annotated Bibliography of Geocoding Resources (2015 and later)**

**1.**

*Accuracy of two geocoding methods for geographic information system-based exposure assessment in epidemiological studies (2017)*

[*https://link.springer.com/article/10.1186/s12940-017-0217-5*](https://link.springer.com/article/10.1186/s12940-017-0217-5)

Showed that in-house geocoding offers more control, but that two automatic methods were comparable in accuracy. Raises the concern of temporal aspects of geocoding (sample contains addresses of 20+ years) Urban geocoding accuracy was substantially better than rural geocoding.

**2.**

*Geocoding Fundamentals and Associated Challenges*. CRC Press; 2017:41-62. doi:[10.1201/b22052-2](https://doi.org/10.1201/b22052-2)

Acknowledges primary sources of error in geocoding. Reference datasets are most frequently roads, but parcel data, and descriptive parcel data are increasingly available and increase accuracy. Sensitivity to misspelling is among the most common issues.

**3.**

Kinnee EJ, Tripathy S, Schinasi L, et al. Geocoding Error, Spatial Uncertainty, and Implications for Exposure Assessment and Environmental Epidemiology. *Int J Environ Res Public Health*. 2020;17(16). doi:[10.3390/ijerph17165845](https://doi.org/10.3390/ijerph17165845)

Analyze the effect of geocoding error on environmental exposure modeling. Find potential systematic error in geocoding that may alter results. Highlights that geocoding in especially dense regions (study was NYC) and in environmental studies should be analyzed for systematic error and reported in analysis.

**4.**

Alexis K, Kaffes V, Varkas I, Syngros A, Tsakonas N, Giannopoulos G. Improving geocoding quality via learning to integrate multiple geocoders. In: *32nd International Conference on Scientific and Statistical Database Management*. SSDBM 2020. Association for Computing Machinery; 2020:1-4. doi:[10.1145/3400903.3400918](https://doi.org/10.1145/3400903.3400918)

Attempt a machine learning approach to composite geocoding, cognizant that different geocoders have differing territorial strengths/weaknesses.

**5.**

Briz-Redón Á, Martinez-Ruiz F, Montes F. Reestimating a minimum acceptable geocoding hit rate for conducting a spatial analysis. *International Journal of Geographical Information Science*. 2020;34(7):1283-1305. doi:[10.1080/13658816.2019.1703994](https://doi.org/10.1080/13658816.2019.1703994)

Investigates the necessary geocoding rate for reliable spatial analysis. Refutes the general “85%” (Ratcliffe 2004) match rate, specifically in conditions in which data per areal units is sparse or there are more areal units. I.e. census tracts require a higher geocoding rate than counties. (Crime data)

**6.**

Andresen MA, Malleson N, Steenbeek W, Townsley M, Vandeviver C. Minimum geocoding match rates: an international study of the impact of data and areal unit sizes. *International Journal of Geographical Information Science*. 2020;34(7):1306-1322. doi:[10.1080/13658816.2020.1725015](https://doi.org/10.1080/13658816.2020.1725015)

Similar in content to [5.] Crime data, refutes Ratcliffe’s 85%, smaller areal units require higher match rates.

**7.**

Kiliç B, Gülgen F. ACCURACY AND SIMILARITY ASPECTS IN ONLINE GEOCODING SERVICES: A COMPARATIVE EVALUATION FOR GOOGLE AND BING MAPS. Published online 2020. doi:[10.26833/ijeg.629381](https://doi.org/10.26833/ijeg.629381)

Compares Google and Bing geocoders and finds similar accuracy, but that Bing performs significantly worse in Turkey.

**8.**

Rashidian S, Dong X, Avadhani A, Poddar P, Wang F. Effective Scalable and Integrative Geocoding for Massive Address Datasets. In: *Proceedings of the 25th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems*. SIGSPATIAL ’17. Association for Computing Machinery; 2017:1-10. doi:[10.1145/3139958.3139986](https://doi.org/10.1145/3139958.3139986)

Present their own geocoding solution named ‘EaserGeocoder’ with a background of data sources and the technical implementation of developing a composite geocoder.

**9.**

Mazeika D, Summerton D. The impact of geocoding method on the positional accuracy of residential burglaries reported to police. *Policing: An International Journal of Police Strategies & Management*. 2017;40(2):459-470. doi:[10.1108/PIJPSM-03-2016-0048](https://doi.org/10.1108/PIJPSM-03-2016-0048)

Compares TIGER geocoding (street interpolation) to Google Maps (parcel data presumed) in the context of residential burglary. Parcel data is significantly better, especially in less urban areas. Emphasizes that in the small units of geography that criminology is often conducted, such errors could make findings less reliable.