

GIS Books - Open Source

[The ArcGIS Book](#) (ESRI)

Understand and use web GIS to create and share geographic information. The Web GIS revolution is radically altering how information about the world around us is applied and shared. This is your learn-by-doing guide into ArcGIS, the powerful mapping and analysis system created by the geospatial pioneers of Esri. Each of the 10 Big Ideas is a “chapter” about how GIS technology unlocks your data to reveal deeper insights and a better understanding of virtually any problem with a geographic dimension. Click on any map to start exploring and learning; then enable your own free Learn ArcGIS account to create beautiful story maps, mobile apps, web maps, and 3D scenes that you can share online.

[The ArcGIS Imagery Book](#) (ESRI)

Explore how imagery and remote sensing power modern GIS. Use this web site and the companion *Instructional Guide for The ArcGIS Imagery Book* and Learn ArcGIS lessons to quickly begin putting imagery to smarter, more skillful use with your GIS. Everyone will appreciate the wealth of images, and links to powerful web apps and maps, that weave interesting stories about our planet and the issues we face.

[Essentials of Geographic Information Systems](#) (J. Cambell, 2011)

Essentials of Geographic Information Systems integrates key concepts behind the technology with practical concerns and real-world applications. Recognizing that many potential GIS users are nonspecialists or may only need a few maps, this book is designed to be accessible, pragmatic, and concise. *Essentials of Geographic Information Systems* also illustrates how GIS is used to ask questions, inform choices, and guide policy. From the melting of the polar ice caps to privacy issues associated with mapping, this book provides a gentle, yet substantive, introduction to the use and application of digital maps, mapping, and GIS.

[ESRI Featured E-books](#)

A collection of PDFs covering a wide assortment of topics

[Spatial Thinking in Planning Practice: An Introduction to GIS](#) (Y. Fang, 2014)

The goals of this textbook are to help students acquire the technical skills of using software and managing a database, and develop research skills of collecting data, analyzing information and presenting results. We emphasize that the need to investigate the potential and practicality of GIS technologies in a typical planning setting and evaluate its possible applications. GIS may not be necessary (or useful) for every planning application, and we anticipate these readings to provide the necessary foundation for discerning its appropriate use. Therefore, this textbook attempts to facilitate spatial thinking focusing more on open-ended planning questions, which require judgment and exploration, while developing the analytical capacity for understanding a variety of local and regional planning challenges.

[Geospatial Analysis - A comprehensive guide](#) (M. Smith, 2016)

Geospatial Analysis online is a free web-based resource. It provides a comprehensive guide to concepts, methods and tools, with many examples being provided using a variety of software tools such as ArcGIS, Idrisi, Grass, Surfer and many others to clarify the concepts discussed

[A Practical Guide to Geostatistical Mapping](#) (T. Hengl, 2009)

A practical guide to geostatistical mapping using R+gstat/geoR, SAGA GIS and Google Earth combo of software packages. Includes seven diverse data analysis exercises. Materials presented in this book have been used for the five-day advanced training course "GEOSTAT: spatio-temporal data analysis with R+SAGA+Google Earth", that is periodically organized by the author and collaborators. Visit <http://spatial-analyst.net/book/> to obtain a digital copy of the book and R scripts / data sets used. This is an Open Access Publication.

[Nature of Geographic Information Systems](#) (D. DiBiase, 2014)

The purpose of this text is to promote understanding of the Geographic Information Science and Technology enterprise (GIS&T, also known as "geospatial").

[Map projections: A working manual](#) (J. Snyder, 1987)

This classic report, was scanned by the USGS and made available for free online in both PDF and DjVu formats. The volume was originally published in 1987 and was written by John P. Snyder. The book provides an overview of the *"appearance, usage, and history is given together with both forward and inverse equations for each [map] projection."*

[StatsRef](#) (M. Smith, 2018)

StatsRef is a free, web-based statistical analysis resource. It provides a comprehensive guide to statistical concepts, methods and tools, with many examples being provided using a variety of software tools such as [R](#), [MATLab](#) and [SPSS](#) to clarify the concepts discussed. It aims to be comprehensive in terms of concepts and techniques (but not necessarily exhaustive), representative and independent in terms of software tools, and above all practical in terms of application and implementation.