



## METADATA

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### Abstract

This book deals with the subject of cartographic composition and rendering in a digital environment and its significance across a wide range of applications in Geoinformatics, which are covered in the following chapters. In the context of the Introduction, the goals of the book are analyzed, and both the topics covered in each chapter and their functional sequence are briefly presented. Additionally, the characteristics of the intermediate results and those of the final product are presented, highlighting the knowledge that the student and, in general, the user will acquire upon completion of the material. Finally, there is a brief presentation of the software recommended in each section of the book, along with a detailed description of the relevant process. For the implementation of the processes of collecting, processing, analyzing, and rendering spatial data, both locally and in a web environment, open-source software such as QGIS and Geoserver is recommended on a case-by-case basis, with concurrent reference to the commercial Geographic Information Systems software ArcGIS. To assist users who are not familiar with these software systems, two appendices are included, providing basic usage instructions for these systems.

In this way, users of the book will be able to address individual applications in more than one software environment and simultaneously develop a critical approach for the capabilities of each one of them. Modern technological developments, particularly the rapid growth and widespread use of computers, undeniably affect all fields of science and engineering. This situation can be likened to the Industrial Revolution of the previous century, whose progress nothing could halt. In the field of Cartography, this trend initially manifested through solutions to the "computational" and "design" problems of maps, and subsequently through the creation of organized digital information databases. This new form of information enabled cartographic organizations to effectively utilize the vast amount of data they possess and to produce a series of cartographic products that meet a wide range of needs. Naturally, this penetration primarily influenced the methodology of composition, given that the final product —albeit with different specifications — remained a printed map. It should also be noted that the way and methodology of using the map have not yet fundamentally changed despite the emergence of the "new" form of the map, the

