VISUALIZING GEOSPATIAL DATA IN *STATA*: SPATIAL MAPS IN *STATA*

GENERAL DESCRIPTION

The creation of spatial maps has become a valuable tool for researchers interested in both the spatial data visualization and the identification of geographical patterns in the data. This course therefore, offers an introduction to the mapping techniques currently available in *Stata* for visualization of geospatial data. The course opens with an overview of the peculiar characteristics of geospatial data, the implications of such for the analysis of such data and an overview of the special terminology used in this field, before moving on to discuss the concept of spatial proximity and its relevance to the visualization of spatial data analysis.

The remainder of the course is dedicated to the principle mapping techniques, using a combination of both official *Stata* commands and a series of user written commands, currently adopted to visualize geospatial data in *Stata*. Participants will learn how to import geospatial data shapefiles in *Stata* and merge them with their existing *Stata* databases in order to create, compare and customize different mapping techniques.

At the end of the course, participants will be able to autonomously implement (with the help of the *Stata* routine templates specifically developed for the course) the appropriate mapping methods, given both the nature of their spatial data and the analysis in hand, within their own research.

TARGET AUDIENCE

This course is of particular interest for criminologists, social psychologists, sociologists, economists, epidemiologists and political scientists seeking to acquire the requisite tools required for the exploration and visualisation of spatial data in *Stata*.

PREREQUISITES

A knowledge of basic statistics (distributions of variables, position indices, dispersion indices) and the statistical software *Stata* is recommended.

PROGRAM

SESSION I: SPATIAL DATA

1. General characteristics of spatial data
2. Types of spatial objects
3. Spatial coordinate systems
4. Maps and shapefiles
5. The transformation of spatial databases

SESSION II: SPATIAL PROXIMITY

1. Spatial distance
2. Spatial proximity matrices
3. Spatial lags
4. Spatial autocorrelation

SESSION III: VISUAL ANALYSIS OF SPATIAL DATA

1. Visual analytics and data science
2. Thematic maps
3. Dot maps
4. Graduated symbol maps
5. Diagram maps
6. Choropleth maps
7. Isarithmic maps
8. Multivariate maps

USEFUL REFERENCES

- Anthamatten, P. (2021). *How to Make Maps: An Introduction to Theory and Practice of Cartography*. Abingdon: Routledge.

- Lambert, N. & Zanin, C. (2020). *Practical Handbook of Thematic Cartography: Principles, Methods, and Applications*. Boca Raton, FL: CRC Press.

DATE AND LOCATION

The 2026 edition of this training course will be offered online on a part-time basis on the 15th of June from 9:00 am to 1:30 pm CET.

REGISTRATION FEES

Full-time Students*: € 155.00
Ph.D. Students: € 205.00
Academic: € 370.00
Commercial: € 495.00

*To be eligible for student prices, participants must provide proof of their **full-time student** status for the current academic year. Our standard policy is to provide all full-time students, be they Undergraduates or Masters students, access to student participation rates. Part-time master and doctoral students who are also currently employed will however, be allocated academic status.

Fees are subject to VAT (applied at the current Italian rate of 22%). Under current EU fiscal regulations, VAT will not however applied to companies, Institutions or Universities providing a valid tax registration number.

The number of participants is limited to 8. Places will be allocated on a first come, first serve basis. The course will be officially confirmed, when at least 5 individuals are enrolled.

Course fees cover: I) teaching materials – copies of lecture slides, databases and *Stata* programs specifically developed for the course; ii) a temporary licence of *StataNow™* valid for 30 days from the day before the course commences.

Individuals interested in attending this course must return their completed *registration forms* by *e-mail* to TStat by the 5th of June 2026.

CONTACT INFORMATION:

Monica Gianni

TStat S.r.l. | TStat Training

Via Rettangolo, 12-14 | I-67039 Sulmona (AQ) | T. +39 0864 210101
www.tstat.eu | www.tstat.it | training@tstat.eu