A VISUAL ANALYSIS OF SPATIAL DATA - MAPPING IN STATA

GENERAL DESCRIPTION

This course offers an introduction to the visual analysis of spatial data using the statistical software Stata. The course opens with an overview of the peculiar characteristics of spatial data and the implications of such for the analysis of spatial data, before moving on to discuss the concept of spatial proximity and the centrality of this particular concept to spatial data analysis. In the final session the focus turns, with the help of series of official and user written commands specifically developed for the visualization of spatial data in Stata, to the main *mapping* techniques implemented for the visual analysis of spatial data in Stata.

In common with TStat's training philosophy, each session of the courses is composed of both a theoretical component (in which the techniques and underlying principles behind them are explained) and an applied (hands-on) segment, during which participants have the opportunity to implement the techniques using real data under the watchful eye of the course tutor. Throughout the course, theoretical sessions are reinforced using applied case studies, in which the course tutor discusses and highlights potential pitfalls and the advantages of individual techniques.

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

TARGET AUDIENCE

This course 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.

PREREQUISITE

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

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

SUGGESTED READING

- 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.

DATES AND LOCATION

The 2022 edition of this training course will be offered ONLINE on a part-time basis on the 25th of November from 9:00 am to 1:30 pm Central European Time (CET).

REGISTRATION FEES

Full-time students*: € 240.00
Ph.D. Students: € 300.00
Academic: € 340.00
Commercial: € 450.00

*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: teaching materials (handouts, Stata *do files* and datasets to used during the course) and a temporary licence of Stata valid for 30 days from the beginning of the course.

Individuals interested in attending this course must return their completed registration forms by email (training@tstat.eu) to TStat by the 15th November 2022.

Further details regarding our registration procedures, including our commercial terms and conditions, can be found at https://www.tstat.it/formazione/visual-analysis-spatial-data-mapping-stata-ol.

PER ULTERIORI INFORMAZIONI RIVOLGERSI A:

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