

# SoBigData Academy

**Roberto Trasarti**  [roberto.trasarti@isti.cnr.it](mailto:roberto.trasarti@isti.cnr.it)

**Sara Lelli**  [sara.elli@isti.cnr.it](mailto:sara.elli@isti.cnr.it)

Coordinator: *Roberto Trasarti*  
Management team: *Valerio Grossi and Michela Natilli*  
Communication Manager: *Daniele Fadda*  
**Institute of Information Science and Technologies (ISTI),  
National Research Council (CNR), Pisa, Italy**

## What is SoBigData?

SoBigData is a distributed **digital** Research Infrastructure with the mission of using social mining and big data to **understand** the **complexity** of our contemporary, globally interconnected **society**.

*In the ESFRI ROADMAP 2021*, currently it relies on competitive projects since 2015



# SoBigData Research Spaces

VERTICAL CONTEXTS FOSTERING TANGIBLE PROGRESS TOWARD GRAND SOCIETAL CHALLENGES



Societal debate  
and misinformation



Demography, Economy  
and Finance 2.0



Sustainable Cities for Citizens



Social Impact of AI and  
explainable machine learning



Health Studies



Disaster response  
and recovery



Next-Generation Internet  
& beyond 5G Networks



Pervasive Intelligence

SoBigData is **coordinated by CNR-ISTI** and distributed over **14 Countries**



Italy



Sweden



Poland



Netherlands



UK



Greece



France



Finland



Spain



Estonia



Germany



Bulgaria



Belgium



Austria

# SoBigData RI **Services**



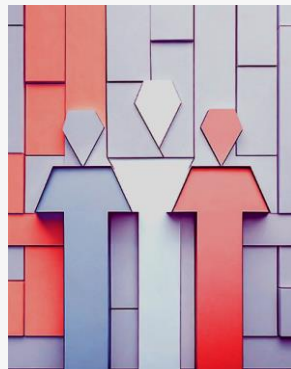
## TECHNOLOGY



D4SCIENCE + SOBIGDATA

- Cloud Computing Infrastructures
- Access and Storage Management
- Thematic Virtual Research Environments
- **SoBigData Lab: Execution Environments**

## RESOURCES



- **Catalogue and Resources Management**
- **Integrated advanced analytics Tools**
- Vertical Applications for Specific Domains

## ETHICAL AND LEGAL



- Policies for FAIR Data Management
- **Ethical and Legal Support for Projects**
- Connections with EU authorities

## TRAINING & MOBILITY



- **Specialized Courses and Workshops**
- Summer School
- Master in Big Data
- **SoBigData Academy**
- Transnational Access program (TNA)

SoBigData

# SoBigData Academy

SoBigData Academy is a way of **promoting high-level education** in AI and Social Mining as well as **promoting Responsible data analysis**.

**SOBIGDATA**  
ACADEMY

All Courses SoBigData.eu Log in

## SoBigData Academy

SoBigData promotes an open innovation culture in Big Data and AI, offering educational resources to support responsible data science. You'll find engaging and flexible MOOCs designed for a relaxed yet captivating learning experience.

Challenge yourself with interactive "play to learn" games, and earn certifications to build your professional portfolio.

Courses

SoBigData RI

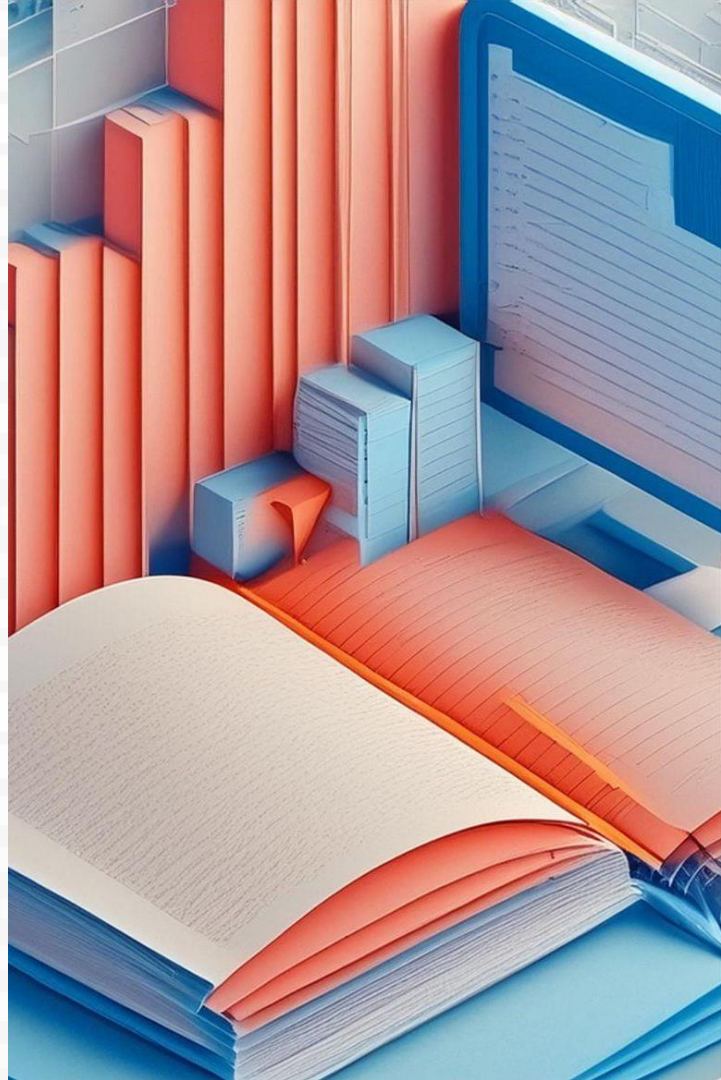
# SoBigData Academy **Objectives**

## **Knowledge Sharing with SoBigData RI**

Making knowledge accessible to everyone, everywhere, as part of the SoBigData Research Infrastructure.

## **Promote Open Science with Free, Specialist-Led Courses for All Users**

Empowering European citizens to understand and manage their data through accessible courses designed for diverse skill levels, with insights from top instructors and partners.



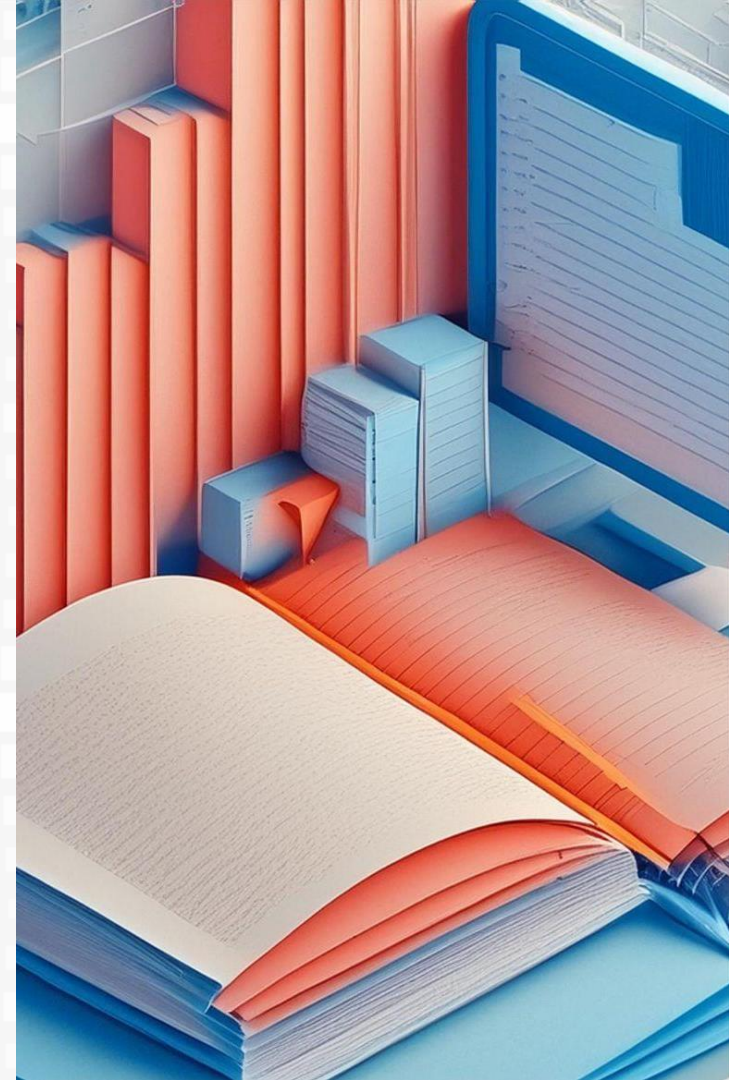
# SoBigData Academy **Objectives**

## **Diverse and Rich Learning Experience**

Offering a selection of courses to ensure a well-rounded education

## **SoBigData-Backed Certification Program**

Providing certifications supported by SoBigData for learners' academic and professional growth.





# SoBigData Academy Principles

## Structured Learning Paths for Self-education

- Two distinct paths:  
*Beginner and Expert*
- Diverse resources to support various learning styles
- Courses adapted for micro-learning modules
- Strong emphasis on *accessibility*

## Peer-Education & Community Engagement

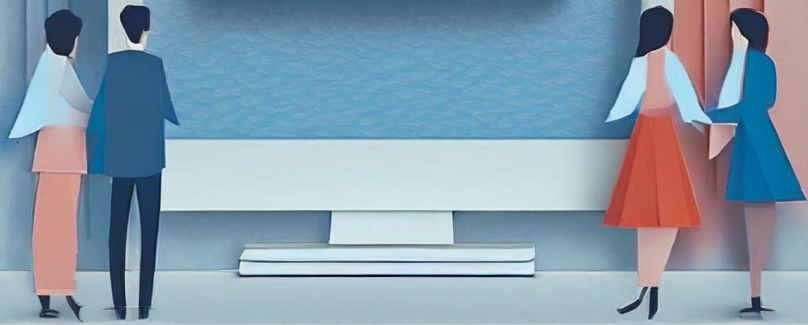
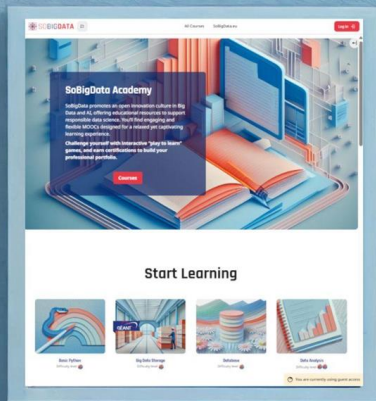
- Active forum participation for peer support and interaction

## Self-Evaluation, Gamification & Hands-On Exercises

- Engaging Self-Assessment Tools
- Quizzes and interactive games:  
Crosswords, Memory, Fill-in-the-blank ...
- No time constraints on activities
- Unlimited Attempts on Activities
- Coding exercises via *Jupyter Notebook*
- Teacher-provided solutions accessible after first attempt

## Badges & Certification

- Activity Badges for recognition:  
Top of the Class  
Quiz Master  
Game Master  
Sociability Badge
- Completion Badge  
Collaboration with the University of Pisa and OpenBadge
- Certification supported by  
SoBigData Research Infrastructure



# SoBigData Academy Partners



SCUOLA NORMALE  
SUPERIORE



Consiglio Nazionale  
delle Ricerche

KING'S  
College  
LONDON



UNIVERSITÀ  
DEGLI STUDI  
DELL'AQUILA



UNIVERSITÀ DI PISA

ETH zürich



Leibniz  
Universität  
Hannover



SAPIENZA  
UNIVERSITÀ DI ROMA



SoBigData

RI

# SoBigData Academy Courses



**Basic Python\***



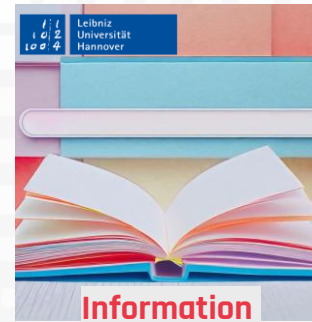
**Database**



**Data Analysis**



**Legal & Ethical aspects of Data Science**



**Information Retrieval**



**Data Mining & Machine Learning**



**Data Analysis with Spark**



**Complex Network Analysis**



**Data Theory & Society**



**Neural Networks & Deep learning**

Additional courses are being developed by SoBigData Researchers

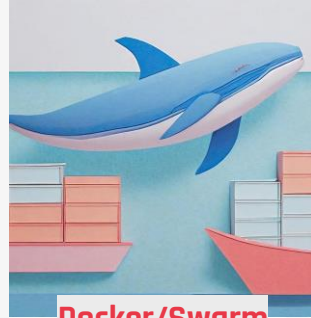
# From to Géant to SoBigData Academy



**Big Data Storage**



**Data Modelling,  
Data Formats &  
Protocols**



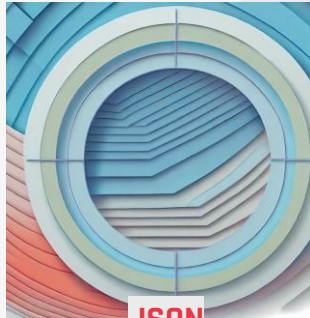
**Docker/Swarm**



**Elasticsearch**



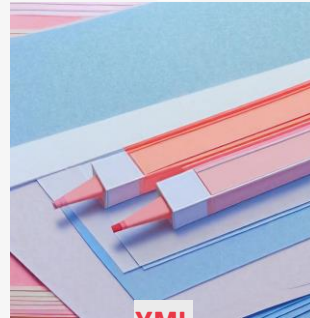
**GitHub**



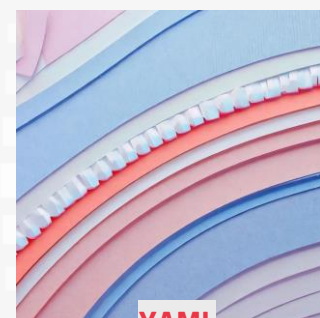
**JSON**



**Kubernetes**



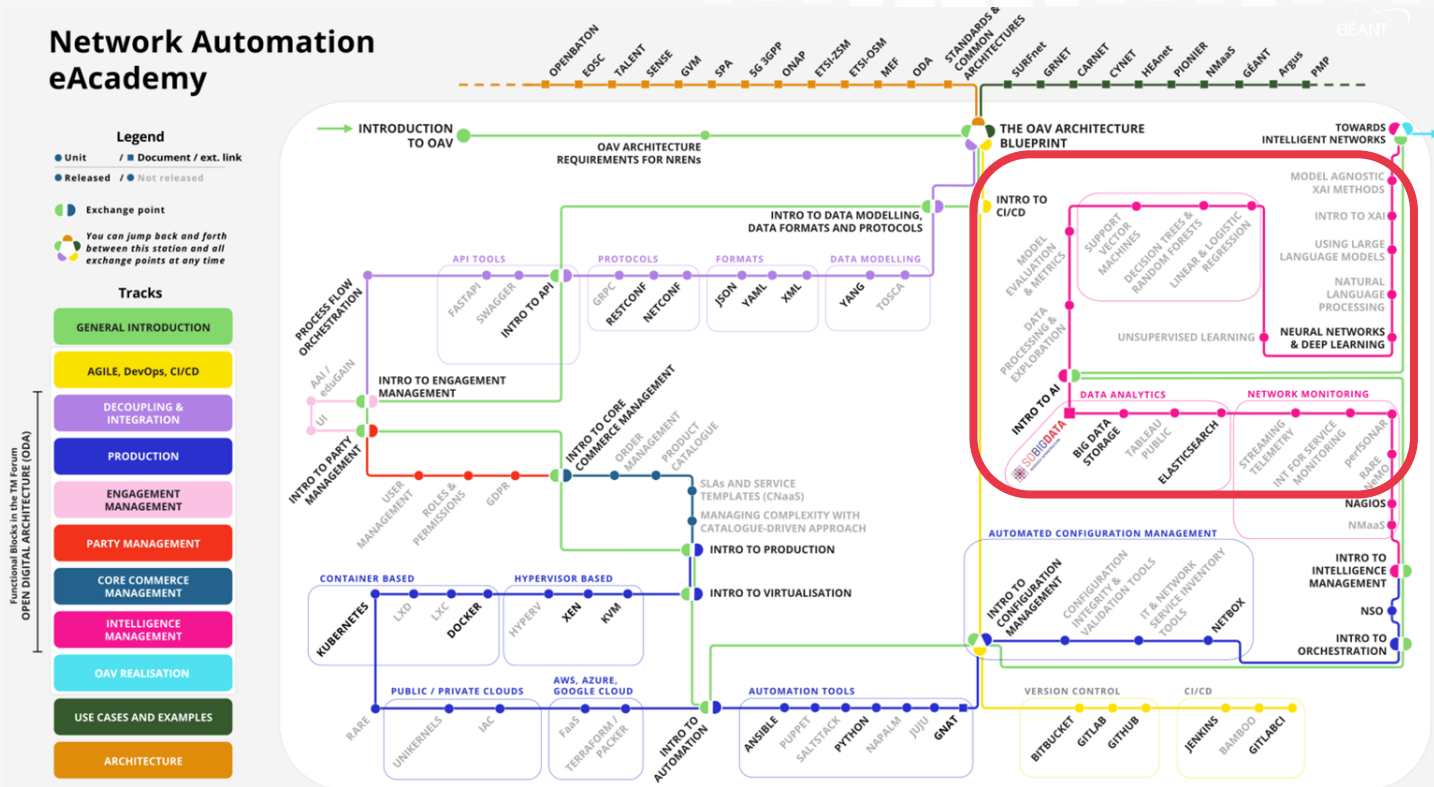
**XML**



**YAML**

# From SoBigData Academy to Géant

## Network Automation eAcademy

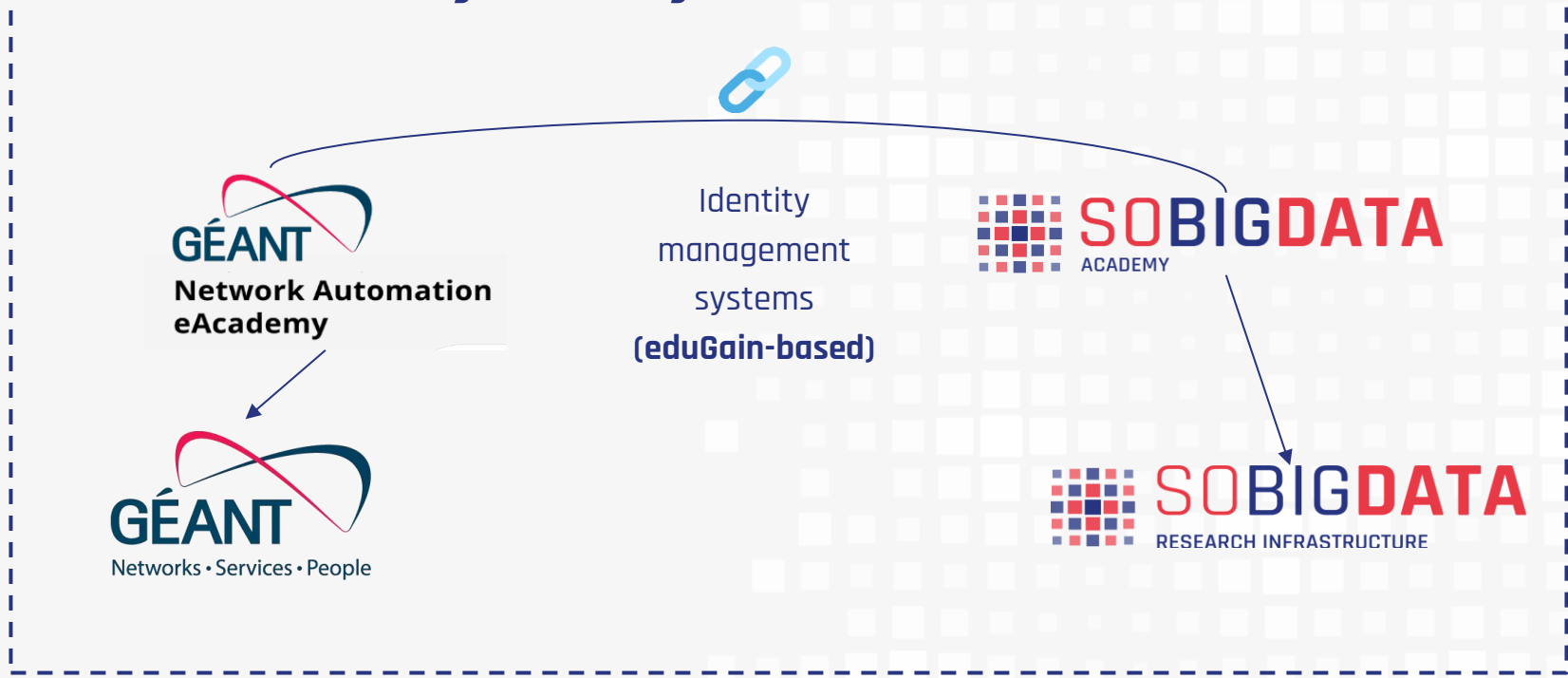


SoBigData Academy courses are accessible through GÉANT eAcademy and viceversa.

We are currently working to integrate the Identity management systems to avoid double log-in.

# SoBigData Academy & Géant

*Joint Communities and Training-Services integration*





**Thank you!**

**[sobigdata.eu/academy](https://sobigdata.eu/academy)**

