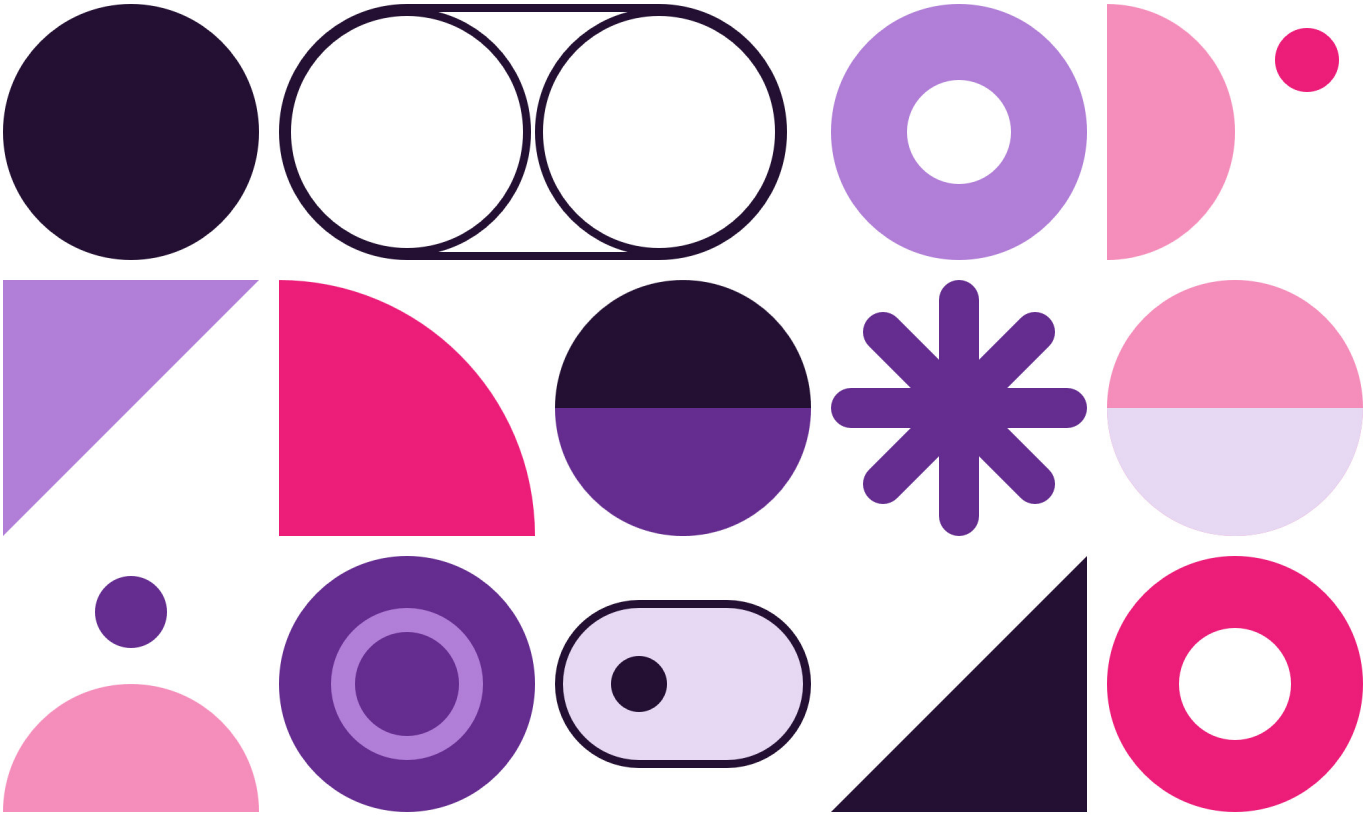
Roma Tre

DATA ANALYTICS



ONLINE EDITION · **6TH EDITION 2027**

Master Data Analytics

Data science and AI, from solid foundations to advanced practice.

LEVEL I Fundamentals

LEVEL II AI & Social Data

APPLY BY
18 Jan 2027

Lessons 100% online

Live and recorded lessons: study from anywhere, at your own pace, alongside work.

High-level faculty

Researchers from Roma Tre University, CNR, INFN, ECMWF and KAUST, plus industry experts.

Official Master's diploma

University Master's degree (Diploma di Master) issued by Università Roma Tre.

Two paths into Data & AI

Two one-year master's programmes from Roma Tre's Department of Industrial, Electronic & Mechanical Engineering and Department of Mathematics & Physics. Start with solid foundations at Level I, or go straight to advanced AI at Level II.

LEVEL I · MDA-FND

Fundamentals

For bachelor's graduates who want solid, hands-on data skills.

60	300
ECTS	hours

Format **Video lectures + live streaming + recordings**

8 MODULES · HOURS

Statistics & Coding	40
AI 1 · Machine learning	35
AI 2 · Deep learning & AI	30
AI 3 · Cloud & DevOps	30
Cybersecurity & FinTech	45
Agents & Data	30
Social Data & NLP	55
Data Processing	35

Credits can be transferred to Level II.

LEVEL II · MDA-AISD

AI & Social Data

For master's graduates, especially in STEM, ready for advanced AI.

60	305
ECTS	hours

Format **Live streaming + recordings**

4 MODULES · HOURS

AI 1 · ML & networks	75
AI 2 · Deep learning	80
Agentic Data Analytics	70
Social Data & NLP	80

Fully online

Study from anywhere, alongside work. Every lesson is available in live streaming and in playback.

Researchers & industry experts

Leading academics and seasoned professionals from Roma Tre, CNR, INFN, ECMWF, KAUST and industry.

A tutor for every student

Personal guidance through the year, up to the final project.

LEVEL I · MDA-FND · CURRICULUM

Fundamentals

22 courses · **300** hours · **60** ECTS

01 Statistics & Coding — 40 h

Python with ChatBot Paola Celio · Roma Tre	**15 h**
Introduction to MATLAB Maurizio Ricci · Roma Tre	**10 h**
Basic Statistics Stefano Mari · Roma Tre	**15 h**

02 AI 1 · Machine Learning — 35 h

Machine Learning Emanuele Maiorana · Roma Tre	**20 h**
Neural Networks with MATLAB Luciano Teresi · Roma Tre	**15 h** + L II

03 AI 2 · Deep Learning & AI — 30 h

TensorFlow Louis Andrianaivo · Independent	**10 h** + L II
ML and AI for Meteorological Data Marcello Petitta · Roma Tre	**10 h** + L II
Explainable Machine Learning Gabriele Nocco · Parma Calcio	**10 h** + L II

04 AI 3 · Cloud & DevOps — 30 h

Cloud Computing Antonio Budano · INFN Roma Tre	**10 h**
Foundations of Modern DevOps Doina Cristina Duma · ECMWF	**10 h**
IDEs as Command Center Giuseppe Tomassetti · Roma Tre	**10 h** + L II

05 Cybersecurity & FinTech — 45 h

Foundations of Cryptography Elia Onofri · KAUST	**15 h**
FinTech and Introduction to Cryptocurrency Fabrizio Villani · SAP	**15 h**
Data Analytics for Anti-Money Laundering Alessandro Bardelli · Joint Services	**15 h**

06 Agents & Data — 30 h

Data Analytics with SQL and AI Chatbots Paola Celio · Roma Tre	**15 h**
Agentic AI & Context Engineering Enrico Zimuel · Politecnico di Torino	**15 h** + L II

07 Social Data & NLP — 55 h

Social Data Analytics Ida Mele · IASI-CNR	**20 h** + L II
Classical Text Analytics & NLP Daniele Capobianco · Independent	**15 h** + L II
Textual and Multimodal Language Models Lorenzo Pozzi · Piazza Copernico	**20 h** + L II

08 Data Processing — 35 h

Sparse Methods for High-Dimensional Data Italia De Feis · IAC-CNR	**20 h**
Data Processing Lucia Morganti · INFN	**5 h**
Biotech Data Processing Matteo Rucco · Spindox	**10 h** + L II

+ L II Also taught in Level II, which continues it with additional hours.

LEVEL II · MDA-AISD · CURRICULUM

AI & Social Data

20 courses · **305** hours · **60** ECTS

01 AI 1 · ML & Networks — 75 h

Explainable Machine Learning Gabriele Nocco · Parma Calcio	20 h +LI
Neural Networks with MATLAB Luciano Teresi · Roma Tre	20 h +LI
Languages for Scalable Data Flavio Lombardi · IAC-CNR	20 h
Introduction to Network Analysis Stefano Guarino · IAC-CNR	15 h

02 AI 2 · Deep Learning — 80 h

TensorFlow Louis Andrianaivo · Independent	20 h +LI
ML and AI for Meteorological Data Marcello Petitta · Roma Tre	20 h +LI
Biotech Data Processing Matteo Rucco · Spindox	20 h +LI
Low-Level Programming for ML and NN Francesco Riganti Fulginei · Roma Tre	10 h
Time Series Analysis TBA	10 h

03 Agentic Data Analytics — 70 h

Agentic AI & Context Engineering Enrico Zimuel · Politecnico di Torino	15 h +LI
Data Analytics for Blockchain Technologies Simone Da Re · Blockchain expert	15 h
Cybersecurity for AI Elia Onofri · KAUST	15 h
Vector Databases & Enterprise RAG Systems Matteo Coppotelli · Independent	10 h
IDEs as Command Center Giuseppe Tomassetti · Roma Tre	10 h +LI
Statistics of Extreme Events Enrico Zimuel · Politecnico di Torino	5 h

04 Social Data & NLP — 80 h

Social Data Analytics Ida Mele · IASI-CNR	20 h +LI
Classical Text Analytics & NLP Daniele Capobianco · Independent	15 h +LI
Textual and Multimodal Language Models Lorenzo Pozzi · Piazza Copernico	20 h +LI
Introduction to SQL and Data Management Francesco Pedulla · Independent	20 h
Large Language Models & Beyond Roberto Maieli · Roma Tre	5 h

+LI Advanced continuation of a Level I course, with Level II-only hours.

How to apply

Sept 2026
Applications open

18 Jan 2027
Application deadline

Feb 2027
Lessons begin

Dec 2027
Programme ends

WHO CAN APPLY

Level I · Fundamentals

Bachelor's degree (or equivalent), Italian or international.

Level II · AI & Social Data

Master's degree (or equivalent), ideally in a STEM field.

Apply online

Through Roma Tre's GOMP student portal. Full details on the programme website.

FEES

Level I · Fundamentals	**€3,500**
Level II · AI & Social Data	**€5,400**

Fees are paid in three instalments (31 Jan, 31 Mar, 30 Jun 2027). Roma Tre students and recent graduates, and MDA Fundamentals graduates are eligible for reduced fees.

CAREER PATHS

- Data Scientist
- Data Analyst
- BI Analyst
- Data Engineer
- Applied Data Scientist

IN PARTNERSHIP WITH

Istituto Applicazioni del Calcolo (IAC - CNR)

Istituto di Analisi dei Sistemi ed Informatica (IASI - CNR)

Istituto Nazionale di Fisica Nucleare (INFN - Roma Tre)

Centro Nazionale Tecnologie Informatiche (INFN - CNAF)

Piazza Copernico

CONTACT THE MDA OFFICE

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Università degli Studi Roma Tre

DIIEM and DMF

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