



MASTER IN

A.I. AND DATA SOLUTIONS

Drive innovation with data and Artificial Intelligence opportunities.

ON CAMPUS | ONLINE

Welcome

**Master in A.I. and
Data Solutions**

Enabling people to shape the digital future

If you're passionate for technology and want to contribute to drive the digital transformation, Barcelona Technology School is your place.

The digital ecosystem in Barcelona is now warmer than ever. The strategic alignment of the government, the industry and educational institutions like BTS, are mixing the best ingredients to boost the European capital of innovation.

The result of Barcelona's digital strategy is excellent: international companies are landing in Barcelona to relocate their digital and tech headquarters and open professional opportunities for those who are ready.

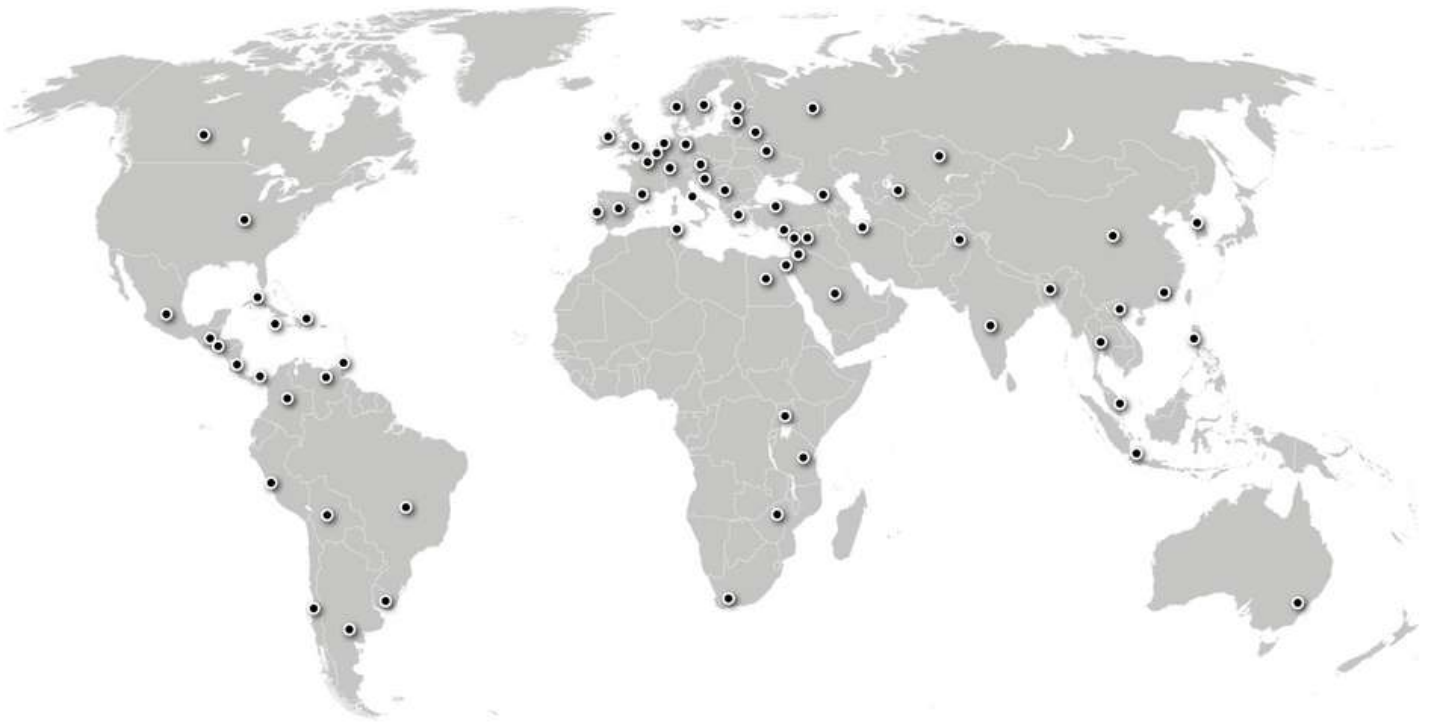


Josep Clotet
CEO Barcelona Technology School

BTS

BTS in numbers

Master in A.I. and
Data Solutions



BTS | QS Stars
TOP Universities

+130

Student nationalities
International diversity

50%

Tech & Business
Background Participants

45%

Women
Gender diversity

97%

Student
Employability rate

BTS

Strategic Advisory Board

Master in A.I. and
Data Solutions



Sudha Jamthe
Silicon Valley



Ricardo Baeza
Silicon Valley



Sergio Gago
Berlin



Angel Garcia
Barcelona



C. Mastrodonato
London

The members of the BTS Strategic Advisory Board are industry leaders with wide experience managing global and strategic digital projects.

This Team helps Barcelona Technology School to take care of the quality and contents of the programs.

Program director



Sergio Gago

Lead Professors

Master in A.I. and
Data Solutions



Miquel Farre
Pre-course



Albert Vilamala
Artificial
Intelligence



Antoine Valverde
Artificial
Intelligence



Mapi Dufol
Innovation



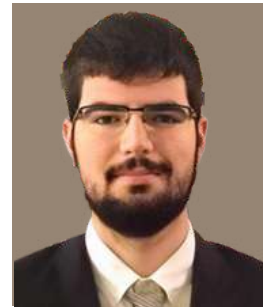
Ana Guasch
Creative Tech.
Entrepreneurship



Xavier Estruga
Big Data Security



Maximus Ndaboka
Data-driven
Business



Marti Segarra
Big Data
Infrastructure



Arthur Prevot
Real-Time Data
Analysis



Roberta Coda
Data Visualization



Josep M. Huguet
Statistical
Foundations



Miguel Sanz
Data Science
Data Analysis



Sergio Gago
Final Project



Xavier Palmero
Agile



Sudha Jamthe
AI Ethics



Marina Palma
Data Visualization

BTS EXPERIENCE

SHAPE THE DIGITAL FUTURE



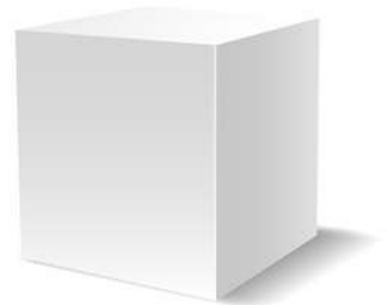
3D Learning

**Master in A.I. and
Data Solutions**

Methodology

Barcelona Technology School has developed its own practical, active and participatory methodology with emphasis on “learning by project” where participants generate their own digital solutions.

This methodology reflects the digital industry demand for new professionals with skills such as:



Technical Skills

- Artificial Intelligence
- GenAI - LLMs
- Technology development
- Cyber security
- Blockchain
- Big data
- Cloud and Devops
- Internet of things
- User experience
- Technology management

Business & Innovation Skills

- Digital transformation
- Agile management
- Creative Technology & Innovation
- Entrepreneurship
- Digital talent and culture
- Change management & Leadership
- Product management
- Fintech | Legal tech | Digital Health

Core Skills

- Empathy
- Communication
- International Scope
- Flexibility
- Collaboration & Network
- Transversal Vision
- Curiosity
- Compromise
- Responsibility



Invest in your future

**Master in A.I. and
Data Solutions**

Industry-Connected Faculty.

Learn from experienced professionals who are actively working in the Data and A.I. industry. Gain insights from their real-world knowledge and benefit from their network of industry contacts.



Project-Based Learning.

BTS's curriculum emphasizes practical application through real-world projects. You'll have the opportunity to work on real development challenge, giving you valuable hands-on experience.



Career Support.

The program offers career guidance services to help you land your dream job. This includes LinkedIn management workshops, speed-datings, interview preparation, and potential job placement assistance.



Industry Immersion

Barcelona Technology School has assembled an ecosystem of companies that support BTS programs, providing industry exposure and bringing professional experience to the students through internships and job opportunities.

Project Mentors

Real & experienced professionals will mentor your digital projects

Digital Companies

Visit and learn from the tech leaders

University of Barcelona

Ensures academic accreditation, quality and certification

Academic Board

Highly qualified instructors and well-known professionals

Career Mentors

Get professional orientation for your digital career

Entrepreneurs & Incubators

Inspire your own projects and new disruptive digital business

Digital Labs & I+D+i

Digital Labs & innovation projects exposure

Invest in your future



BTS Ecosystem – Companies and Partners that take part in the student experience and professional development:

amazon

Microsoft

Meta

Google

Adobe

BSC Barcelona Supercomputing Center
Centro Nacional de Supercomputación

Boehringer Ingelheim

PEPSICO

sanofi

Nestlé

accenture

Glovo

Gartner

eDreams

TikTok

vodafone

Rakuten

Pier01
BARCELONA TECH CITY

GFT

VW

NATURITAS

Hewlett Packard Enterprise

cognizant

PAL ROBOTICS

NIKE

MediaMarkt

ocado TECHNOLOGY

Ogilvy

NTT DATA

hp

NOVARTIS

Openbank

wallbox

Deloitte

N26

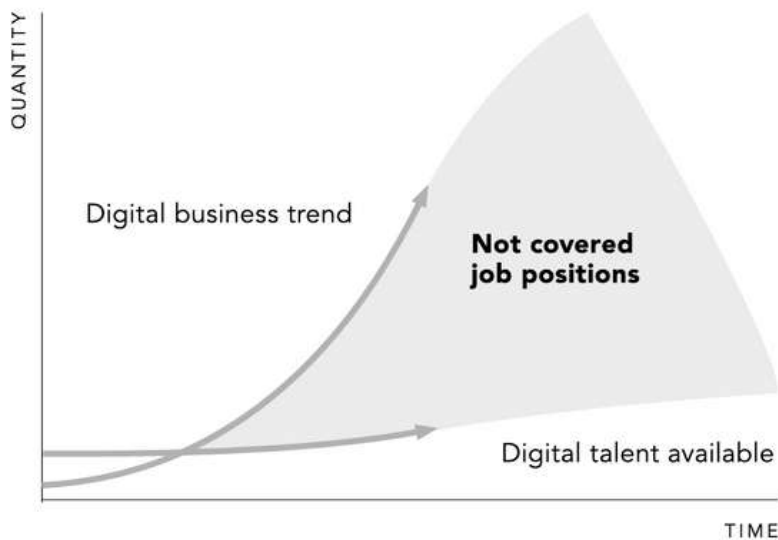
Invest in your future

Master in A.I. and
Data Solutions

Digital companies need your talent

Tech industry is exploding and the key digital companies need your talent. Barcelona Technology School connects your career with the digital sector while offering you the most demanded digital knowledge & skills.

Digital Talent Gap



By this year there will be 4.500.000 unfilled digital jobs worldwide

Source: Bureau of Labor Statistics' Occupational Outlook, Handbook and Career Guide to Industries.



Recognition and Accreditations

Master in A.I. and
Data Solutions



**QS Stars
TOP Universities**

BARCELONA TECHNOLOGY SCHOOL

BTS rated for Excellence by QS

QS is considered one of the TOP 3 international rankings of universities in the world. Its Intelligence Unit has, through rigorous and independent data collection and analysis of performance metrics as set out in the QS StarsTM methodology, and rated for Excellence Barcelona Technology School.

Teaching



BTS rated as five stars institution.

Employability



BTS rated as five stars institution.



Live the Barcelona's vibes

Master in A.I. and
Data Solutions



CAMPUS LOCATION

COOLEST
10 STREETS IN THE WORLD*

Barcelona Technology School's campus is perfectly situated in the Eixample district, making it an ideal choice for international students.

The campus is located in a renowned street for its lively atmosphere filled with cafes, shops, and cultural spots, offering a true taste of Barcelona's unique lifestyle.

The BTS campus is also exceptionally well connected, with easy access to Barcelona's main attractions, such as La Sagrada Familia, the Gothic Quarter, and the beach.

This prime location allows students to explore the city easily, enhancing their experience as they immerse themselves in Barcelona's rich culture, history, and dynamic social scene.

BTS Campus location:

Cooltest 10 streets in the world according to TIME OUT LONDON 2024.

My Digital Impact

Master in A.I. and
Data Solutions

Having a purpose for professional happiness

A Team of mentors will help you define your own purpose according to what you love, what you are good at, what you can be paid for and how you can improve the world with such amazing skills. This ensures you focus your energy on a job you really love, which is the best way you can drive a great digital impact.



We help Barcelona Technology School students to achieve their professional goals and find happiness in life doing what they love the most.

This is driven by a Japanese concept called IKIGAI, which describes the secrets for a long and meaningful life. To achieve this goal you have to identify your reason for being and your own purpose.

BTS will help you to find your IKIGAI and a Team of mentors will advise you during this exciting journey that will boost your digital impact on the society.

My Digital Impact

Master in A.I. and
Data Solutions

Get advice from international digital leaders

BTS Mentors are generous people that believe in the power of sharing. They are happy to share with you their vision and wide experience as digital leaders in top global tech companies. Get advice from digital sages that will help you to drive your purpose and develop a great career in the digital industry.



Sudha Jamthe
Silicon Valley



Ravi Daswani
London



Ken Herron
Singapore



Charles Ikem
Padova



C. Mastrodonato
London



Emma Bawden
Barcelona

BTS Mentors. A Team of professionals with experience leading digital projects in companies such as:

Google

accenture

facebook

ebay

PEPSICO

ocado
TECHNOLOGY

GFT

Nestlé

holaluz

PUIG

Adevinta

sanofi

YOUR CHOICE

ON CAMPUS | ONLINE



On campus

Master in A.I. and
Data Solutions

Barcelona learning experience

We believe that our students should be aware of how the real-professional world looks like in the digital industry. Besides our practical methodology, we provide professional insight, we go outside the classroom to see directly how disruptive technologies change the way we work and innovate. Take a look to the videos showing some past experiences. These are also opportunities to do networking and gain potential professional opportunities:



BTS Campus location:

Cooltest 10 streets in the world according to TIME OUT LONDON 2024.

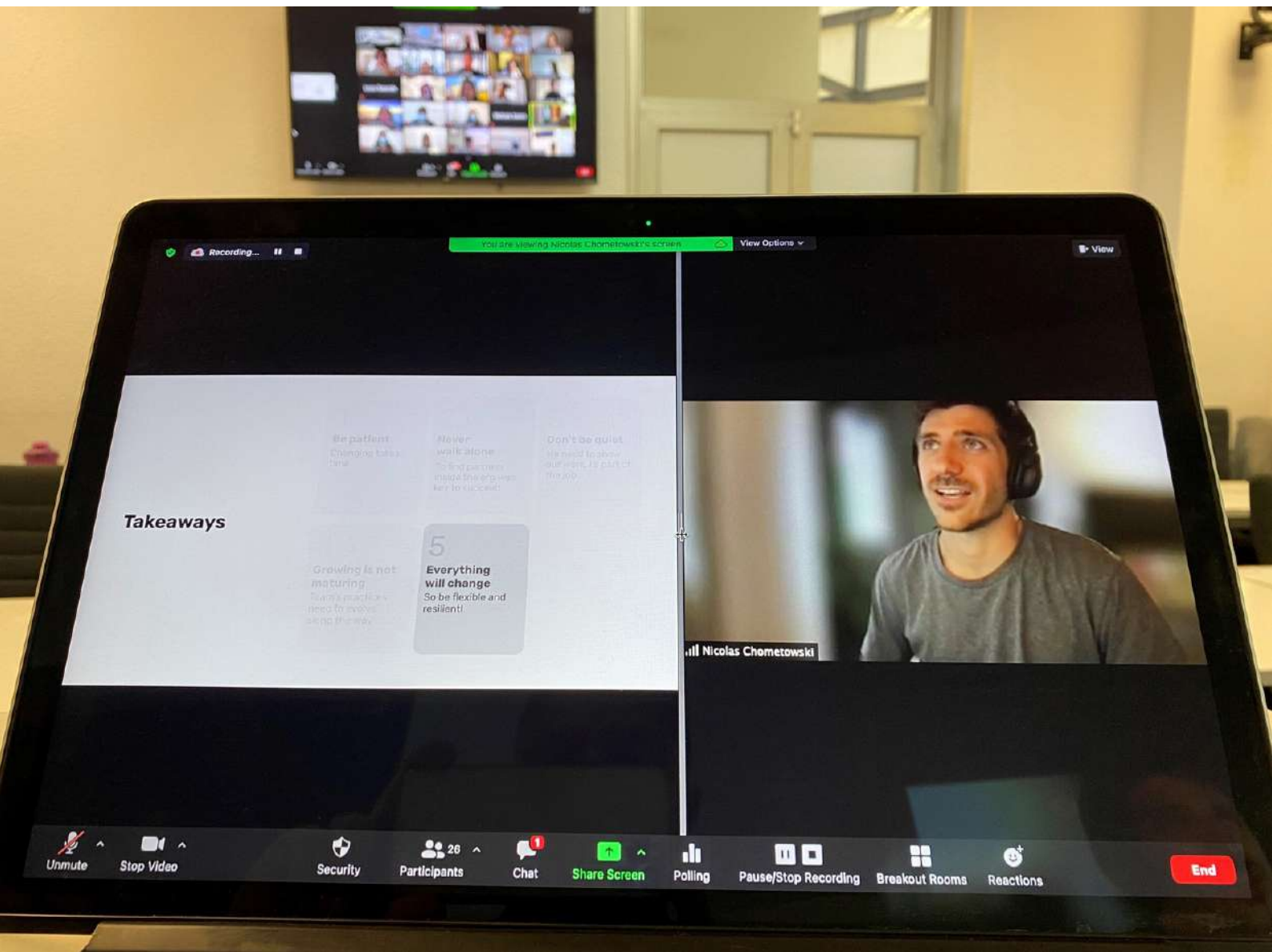


Online

Master in A.I. and
Data Solutions

Adapted to your needs

On the other hand, If relocating to Barcelona is not an option, you can still experience the program through our Live Online format. Join real-time, highly interactive classes with the same comprehensive curriculum and high academic standards, ensuring a cutting-edge academic experience from anywhere in the world.



STUDENT WELLBEING



Sports

**Master in A.I. and
Data Solutions**

All the BTS students enrolled into a on-campus Master program have especial conditions to access one of the best sport clubs in the city which is located right in front of the beach. Enjoy indoor and outdoor swimming pools, gym and lead classes, spa, paddle courts and much more. Play sports, make friends or simply take a relaxed bath on the sea.

Club activities

- SPA
- Fitness
- Swimming
- Aquatic sports
- Padle tennis



GLOBAL CHAPTERS

SHAPE THE DIGITAL FUTURE



Global chapters

Master in A.I. and
Data Solutions

The Global Chapters programs are an international experience for students & entrepreneurs that want to discover the epicenters of the world's digital ecosystems.



CHAPTER 1

New York

1 week
English
3.000€



CHAPTER 2

Shangai

1 week
English
3.000€



CHAPTER 3

Silicon Valley

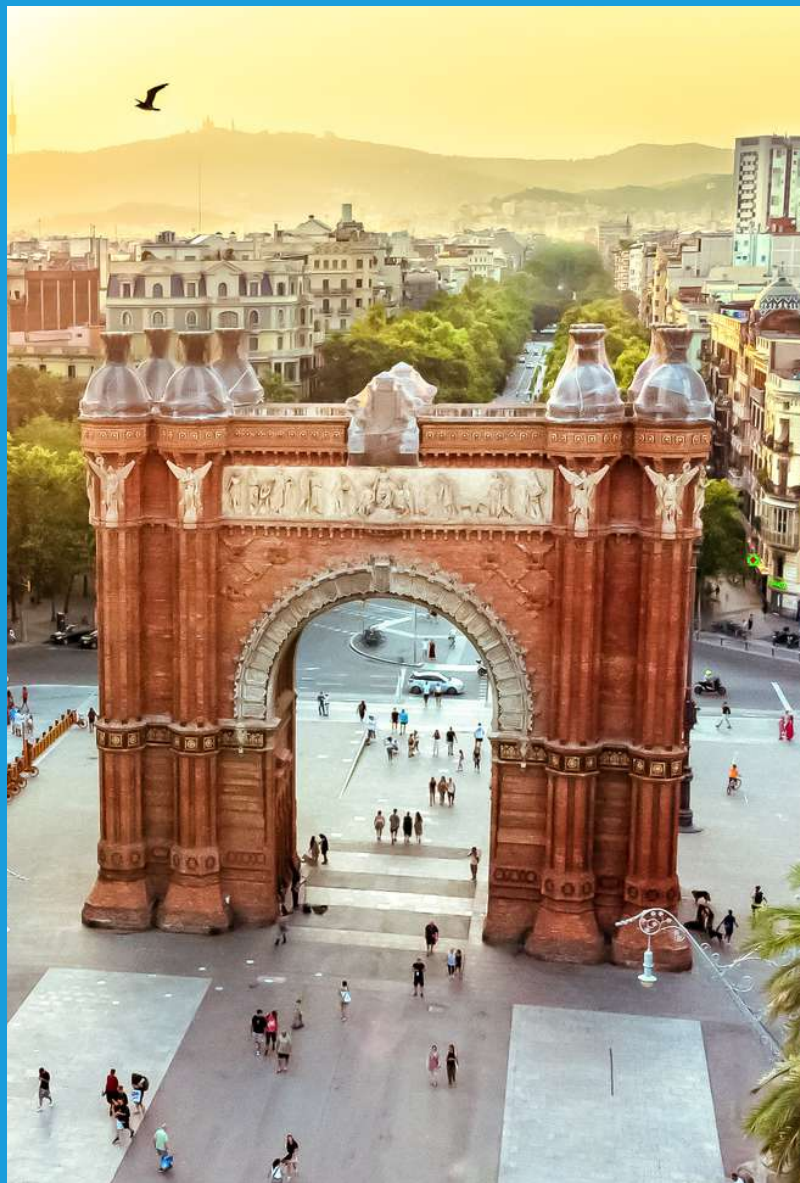
2 weeks
English
5.000€

This experience exposes students to how business is done in those ecosystems and creates long lasting relationships between students, companies, and business leaders.

Sample Week Itinerary:

MONDAY	TUESDAY	WEDNESDAY	THURSDAY
Visit large digital corporations	Tour of Silicon Valley	Entrepreneurship culture immersion	Visit the Palo Alto Research Center
FRIDAY	SATURDAY	SUNDAY	
Network building	Private VC and Startup parties	Free	

MASTER IN **A.I. AND DATA SOLUTIONS**



BOOST INNOVATION WITH DATA AND A.I. OPPORTUNITIES.

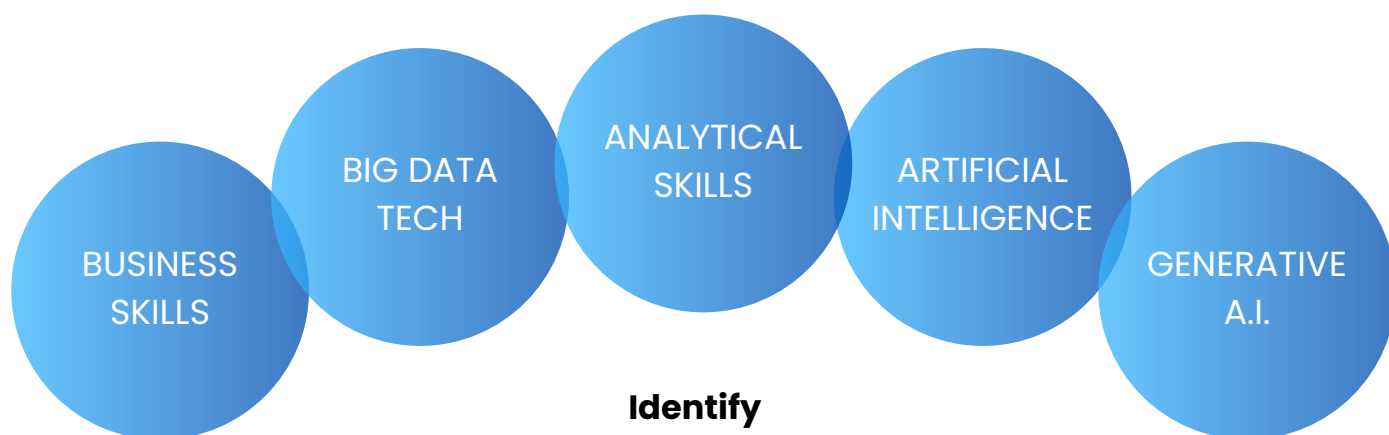
The Master

On campus | Online

Master in A.I. and
Data Solutions

Master in A.I. and Data Solutions

Combine



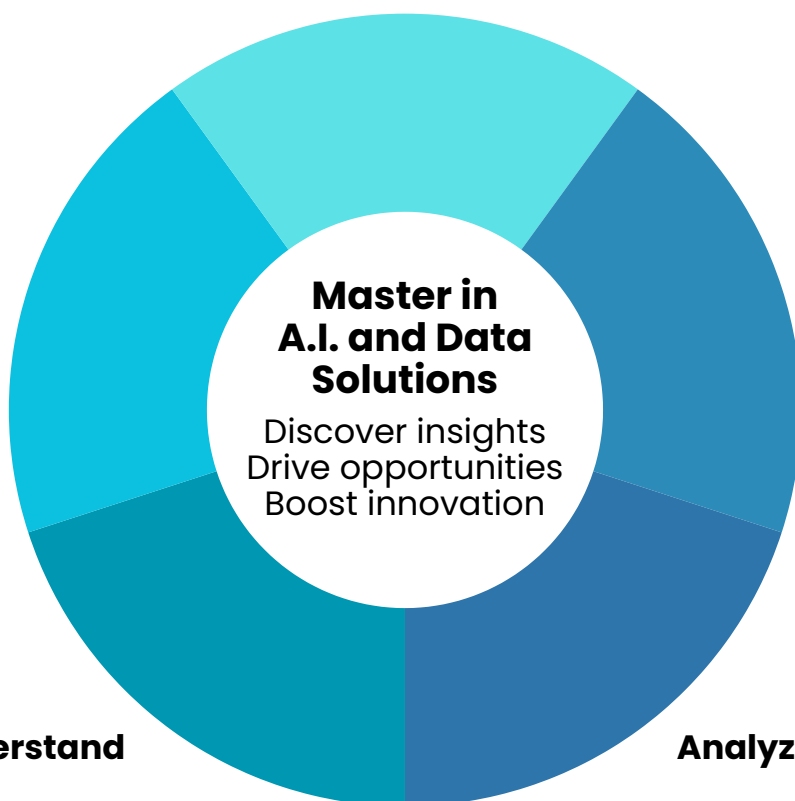
Identify

Artificial
Intelligence
transformation

Understand

Analyze

Collect



BTS



Statistical Foundations for Data-Science

Students will learn to extract meaningful patterns and trends from large and complex datasets using data mining techniques. They will explore methods for data organization, storage, and search optimization. The course emphasizes critical thinking and statistical reasoning to interpret what the data reveals.



Data-Science Foundations

Students will learn how to manage data, perform time series analysis and forecasting in Python. They will learn how to fit data to probability distributions and regression models, use Python/Pandas to perform general statistical analysis in their data, apply appropriate and useful Geographic Information System (GIS) tools and Geostatistics in Python to find spatial data patterns.



Innovation & Creative Technology

Students will experience the process of discovery, interpretation and ideation. They will learn techniques to identify opportunities and understand customer needs. They will integrate the process of conceptualization and creative design that will help them design innovative digital solutions.



Entrepreneurship

Students will learn to shape opportunities, provide the leadership and build the team to create economic and social value. They will create and develop business models for start-ups based on customer development and continuous validation, managing financial metrics and dealing with investors.



Data Driven Business

Students will understand how big data projects can bring value to an organization, how data can be applied to solve real business problems because of the large amounts of data available generated by digitalization. Student will also develop communication and persuasion skills, since data results and projects usually have to be given and carried out in a company context.



Infrastructure for Big Data

Students will learn how to use software for managing large amounts of data and fast data streams, particularly focusing on distributed systems for storage and processing data with an emphasis on the open source. They will learn how to design efficient system architectures to capture, process and store Big Data, as well as the best practices in provisioning, deploying, tuning and maintaining Big Data systems.



Classical Data Analysis

Students will learn analytical skills and the most important supervised and unsupervised learning algorithms for regression, classification and clustering, to apply them to an analytic or business intelligence strategy. They will learn how to use Python libraries to run these data mining algorithms and use the trained models for prediction.



Real-time Data Analysis

Students will learn the specialized data management infrastructures and algorithms needed to deal with challenging data sources. They will learn distributed algorithms, which are specifically designed for large-scale data being processed in a parallel/distributed computing environment. They will also perform operations in data streams, including clustering data, and use the map-reduce paradigm in a distributed setting.



Data Visualization

Students will learn the skills necessary to explain the processes they performed with the data, including the entire data analysis pipeline, and the obtained results, in an effective and clear way to a broad audience. This includes being able to communicate all assumptions and nuances that this may have. Data visualization paradigms will be introduced and explored in the context of storytelling, describing how to use them to convey complex data-driven messages.



Big Data Legal & Security

Students will learn what are the legal barriers of the data management and the core security principles in a Big Data project, including confidentiality, integrity and availability (CIA). They will also learn the principles behind symmetric and asymmetric cryptography and they will apply them by building an end-to-end security implementation for a corporate network.

Contents



Agile

Students will immerse in the Agile mindset by experimenting the Agile management practices. At the end of this subject they will be able to practice Scrum, understand Kanban, develop and idea from Vision to Deployment from an Agile perspective and define requirements with User Stories.



Advanced Data Analysis

As a continuation of the Classical Data Analysis module, this one will develop the skills to deal with complex data types such as a “basket” (a set of elements like a shopping cart), a network/graph, or georeferenced data. Students will learn different methods to analyse each data type, like association rules mining, algorithms, georeferencing, creation of maps and location-aware models.



Artificial Intelligence

Students will learn to exploit the full potential of Artificial Intelligence by developing hands-on expertise in Deep Learning, Neural Networks, and Generative AI. Through practical projects using frameworks like PyTorch, they will master advanced architectures such as CNNs, RNNs, Transformers, and Diffusion Models. The course explores real-world applications in Computer Vision and Natural Language Processing, including image classification, object detection, and AI-generated content.

Contents



Project

Students will learn to design, build, and pitch a real-world AI and big data solution, applying everything they've learned throughout the program in a hands-on, startup-style capstone project. Working in collaborative teams, students will develop a working Minimum Viable Product (MVP) that combines data engineering, machine learning, and business strategy, culminating in a final investor-style pitch on Demo Day. Throughout the project, students will master the complete product development lifecycle—from ideation and value proposition to data acquisition, model deployment, and go-to-market planning.

Summary

**Master in A.I. and
Data Solutions**

ON CAMPUS | ONLINE

TYPE
Full Time On campus Online
LOCATION
Barcelona, Spain
DURATION
9 months (1 academic year)
LANGUAGE
English
INTAKE
April October
FEES
17.500€
ACCREDITATION
BTS & IL3- University of Barcelona
CREDITS
60 ECTs

Take advantage of the BTS ecosystem and explore professional opportunities during & after the program.

Program awarded by
Barcelona Technology
School, ranked as an
excellence university
by QS stars :



**QS Stars
TOP Universities**

Teaching



Employability



How to apply

Master in A.I. and
Data Solutions

If you are passionate about data and A.I. solutions, we just need from you:

1. **Apply online or via email** – Complete the application or send your application directly to admissions@barcelonatechnologyschool.com
2. **Submit your profile:** submit your LinkedIn profile or CV and a motivation letter explaining your vision for the future of the digital industry and your role in its transformation. If your profile aligns with the Master, we'll reach out to schedule a conversation.
3. **Interview:** the Admissions Team will arrange an interview to understand how your profile could match with the Master.
4. **Admissions review:** Our Admissions Board will review your application. We will notify you the Admissions Board decision in the next 48 hours.
5. **Enrollment:** if you are admitted we'll guide you through the next steps to join BTS.

Seats are limited, start your application now!

Admissions Office:

- +34 932 714 244
- admissions@barcelonatechnologyschool.com
- www.barcelonatechnologyschool.com

STORIES OF PAST GRADUATES

Master in A.I. and
Data Solutions



Iva Doseva | BULGARY

"At BTS I learned how powerful and beautiful data can be!"



Elena Ginebra | MEXICO

"This time abroad has impacted me a lot personally and professionally."



Franco Bonifetto | ARGENTINA

"BTS helped me a lot in the transition towards critical thinking. Thanks to an expansive understanding of data, my career took off."

Where BTS Alumni works

amazon

Microsoft

Meta

Google

Adobe

CATERPILLAR®

Glovo?

GFT



NOVARTIS

Openbank

wallbox

vodafone



accenture

CRITEO

Deloitte.

NTT DATA

SANOFI

cognizant

Gartner.

MediaMarkt

aws



eDreams

Rakuten

IBM

ORACLE®

N26

FREE NOW

DUAL DEGREE MASTER'S PROGRAMS

SHAPE THE DIGITAL FUTURE



WHO IS THE DUAL DEGREE FOR?

**Dual degree
master's
programs**

Unlock your potential and embark on a transformative educational journey with our cutting-edge dual degree programs.

Designed for ambitious international students passionate about technology and digital transformation, our innovative curriculum will equip you with the perfect blend of technical expertise and leadership skills to thrive in today's dynamic job market.

Imagine mastering the complexities of emerging technologies while developing your strategic thinking and problem-solving abilities. With our dual degree programs, you'll gain a deep understanding of the digital landscape, empowering you to drive impactful change and shape the future of tech-driven industries.

Stand out from the crowd as a global professional with a diverse skill set that combines management, leadership and technology transformation.



BTS

ADVANTAGES OF DOING A DUAL DEGREE

Dual degree
master's
programs

01. skills set

Combine digital transformation or product management skills with specific knowledge in data and Artificial Intelligence for an innovative problem-solving approach.

02. career

The combination of technical knowledge and leadership skills positions you as a highly sought-after candidate.

03. networking

BTS attracts a diverse student community, providing you with a global network and valuable international exposure. Collaborating with peers from different backgrounds and cultures enhances your cross-cultural communication skills and broadens your perspective, preparing you for a globalized workplace.

04. time

Obtain two masters in a year and a half. Study at BTS offers the unique advantage of being located in Barcelona, a vibrant and innovative city known for its thriving tech ecosystem and entrepreneurial spirit.



DUAL DEGREE STRUCTURE

Unlock a world of possibilities with our diverse range of dual degree master's programs, offering you a comprehensive education in both digital transformation, product management principles and Big Data & Artificial Intelligence.

Tailor your academic journey by choosing your professional preferences mixing management skills among specialized abilities in Data Science.

Management



Specialized

Digital Transformation + Data Science

MDTL | summer break | MBDA

Digital Product Management + Data Science

MDPM | summer break | MBDA



BTS programs

BTS



BTS | QS Stars
TOP Universities



97% Student
employability
rate.



International ecosystem
of top digital companies
& tech labs.



Development of the
most demanded
digital skills.

**Available
services:**



**Beach & sports
club**, located at
the beachfront of
Barcelona.



Health insurance
Full medical
coverage.



Great opportunities await BTS graduates



**SHAPE
THE DIGITAL
FUTURE**



Information and admissions

info@barcelonatechnologyschool.com
+34 932 714 244

Location

Barcelona. Consell de cent, 419
Barcelona's city center