BTS | Barcelona Technology School

Master in Big Data Solutions

2016 | www.barcelonatechnologyschool.com

Welcome

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 results of the Barcelona's digital strategy are excellent, international companies are landing in Barcelona to relocate their digital and tech headquarters. Just to mention a couple of examples, this is the recent case of Zurich insurance group, which is opening its global Big Data center in the European capital of innovation. Also the Swiss company Nestlé has recently announced that their international digital services will be lead from the city.

A healthy startup environment also feeds this innovative ecosystem; the city concentrates 60% of the total investment on startups in Spain. This, supported by initiatives like the Mobile World Congress, makes the city an ideal place for international entrepreneurs. More and more, startups, accelerator programs, venture capital players and tech educational projects choose the city to develop its activity.
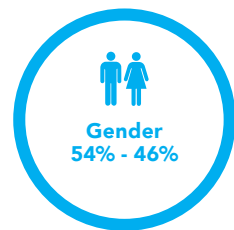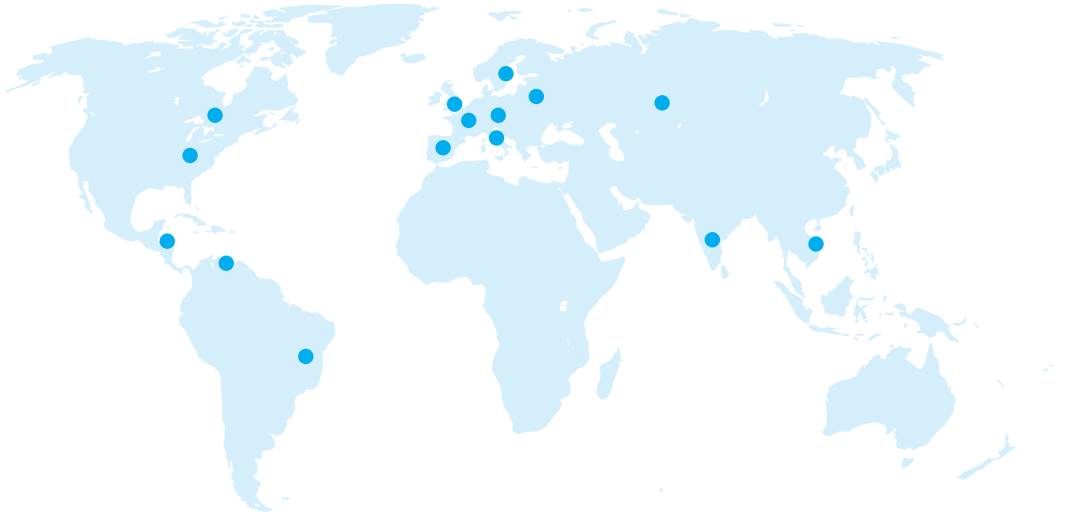
As consequence of this healthy tech ecosystem, it is generated a high demand of digital talent. That permits Barcelona Technology School to ensure you professional experience through paid internships and job opportunities during master programs that will help you to develop the most demanded digital skills.

Now, you have the opportunity to join the digital transformation from one of the hottest international tech spots.

Josep Clotet
General Manager

BTS Student Profile

15
Countries Represented

27
Average age

Gender
54% - 46%

55%
Engineering & Computing

27%
Economics & Management

9%
Sciences

9%
Others

Strategic Advisory Board

Ricardo Baeza
Yahoo!
VP of Research

Aleix Valls
Mobile World Capital
General Manager

Marko Gargenta
Twitter
Director of Twitter
University

Sudha Jamthe
Ebay
Mobile Business Leader

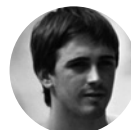**Andy Feierfeil**
Target
Senior Manager Mobile

The members of the BTS board of strategic advisors are well known industry leaders who take care of the quality and contents of the programs.

Academic Directors

Sandro Mancuso
London Software
Craftsmanship Founder

Elies Campo
Whatsapp
Business Development

Professors

Marc Planagumà
Big Data

Miquel Rodríguez
Agile

Saul Tessler
Entrepreneurship

Jorge Blasco
Digital Business

Javier Domingo
Cloud Computing

Pablo Sordo
Android Development

Gaby Prado
User Experience

Michele Trevisiol
Big Data

Sonia García
Web Development

José Carlos Gil
Software Craftsmanship

José E. Rodríguez
Web Development

Pedro Fernandes
Creative Technology

Martí Escursell
Venture Capital

Marc Boquet
iOS Development

Alfred Maeso
Project Management

BTS METHODOLOGY LEARNING ECOSYSTEM

Barcelona Technology School has developed its own practical, active and participatory methodology with emphasis on "learning by project".

A key part of the program is project-based learning, where participants will either generate and develop their own digital projects & solutions. This methodology reflects digital industry demand for new professionals with skills such as:

Core Skills
General in all BTS Programs

Empathy & Communication

International Scope

Flexibility

Collaboration & Network

Transversal Vision & Curiosity

Compromise & Responsability

BTS

Academic Board
High 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 Companies
Visit and learn from the tech leaders.

IT Labs &I+D+i
IT Labs & innovation projects exposure

Project Mentors
Real & experienced Professionals will mentor your digital projects

University
Ensures academic accreditation, quality and certification

Technical Skills
Specific for each Program

Data-Driven Business

Statistics & Programming

Data Science

Algorithms for Data Science

Infrastructure & Cloud

Data Visualization & Exploitation

Big Data Solutions

Big Data Applications

Business and Innovation Skills
Specific for each Program

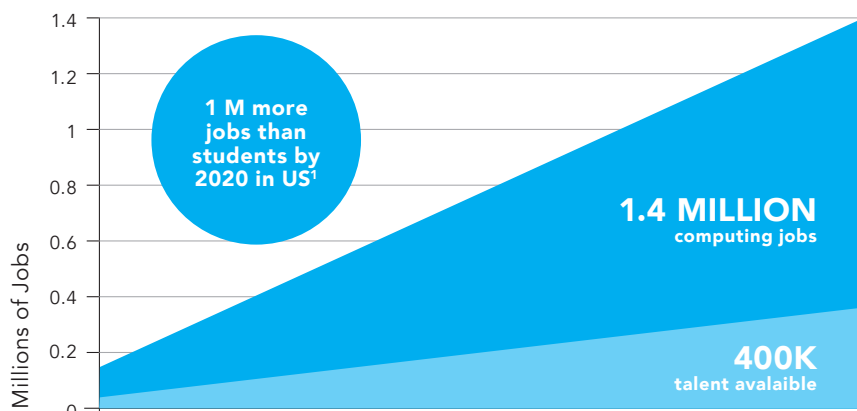Digital Business Administration

Mobile Business

Creativity & Innovation

Analytics & Data

Project Management

Entrepreneurship

Digital companies need your talent

1 M more jobs than students by 2020 in US[1]

1.4 MILLION
computing jobs

400K
talent avalaible

Millions of Jobs

1.4
1.2
1
0.8
0.6
0.4
0.2
0

[1]Source: BLS, NSF, Bay Area Council Economic Institute; [2]Source: Bureau of Labor Statistics' Occupational Outlook, Handbook and Career Guide to Industries.

By **2024** there will be **4.500.000** unfilled computer science jobs worldwide[2]

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

Thanks to the agreements Barcelona Technology School has with the digital industry, you will have the chance to live a professional experience trough paid internships in some of the top digital companies that are part of the BTS Ecosystem.

Your Talent

BTS

Digital Industry

Paid Internships & Jobs Opportunities

Sports

All the BTS students enrolled into a Master program have free access to one of the best sport clubs in the city which is located in front of the beach. Enjoy 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.
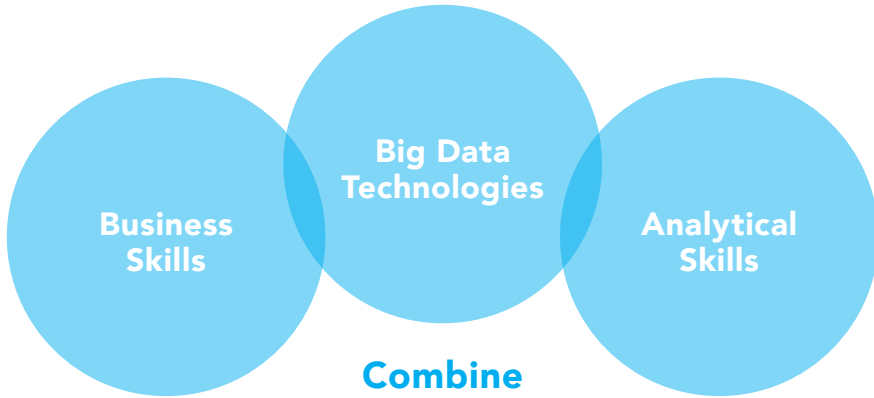
Master in Big Data Solutions. MBDS

Objectives

MBDS main goal is to help you to boost innovation
applying the most demanded analytics
and big data skills.

During this program you will learn to extract relevant
insights from data and to generate strategic solutions
for any kind of organization or industry using
the most advanced analytics
and data technologies.

Become an international professional able to discover
insights and drive innovation in any organization.

Exciting Big Data Opportunities

Business Skills

Big Data Technologies

Analytical Skills

Combine

Identify → Collect → Analyze → Understand → Transform data

Discover insights
-
Drive opportunities
-
Boost innovation

4,4 M
Jobs created by Big Data

Health care, Finance, Technology, Public Administration, Internet of Things, Marketing…

*Gartner predicts 4,4 million jobs created by 2015.

Contents Master in Big Data Solutions

Data-Driven Business
1. Data economy
2. Lifecycle of data services
3. Managing Big Data Projects
4. Agile

Algorithms for Data Science
1. Classification
2. Neural networks
3. Social networks
4. Geospatial analytics

Statistics & Programming
1. Basic data operations
2. Data manipulation in Python
3. Probability
4. Estimation

Infrastructure & Cloud
1. Data engineering
2. Scalability systems
3. Architectural practices
4. Infrastructure management

Data Science
1. Foundations of data analytics
2. The data science pipeline
3. Main analytic techniques
4. Visual analytics

Data Visualization & Exploitation
1. Exploitation
2. Delivery models for data analytics
3. Interaction concepts
4. Visualization of graphs

Contents Master in Big Data Solutions

Big Data Solutions
1. Architectural solutions
2. Web development
3. Mobile development
4. User experience

Big Data Applications
1. Customer analytics
2. Social media
3. Logistics
4. Telecommunications

Digital Business
1. The digital transformation
2. Digital products
3. Online marketing
4. Creative strategy on the internet

Creative Technology
Ability to think creatively with a business frame of mind, focusing on bringing new innovations to market. It will instill an appreciation of the characteristics and motivations of creative people.

Entrepreneurship
Basics associated with innovation and building a new venture or initiative from scratch either inside an existing organization or as a new startup

Project
Hands-on training. Thanks to a Big Data transversal challenge, students combine business skills, Big Data technologies and analytical skills aimed to discover insights and drive innovation.

Contents can be modified according to the needs of the program.

Details Master in Big Data Solutions

TYPE	LOCATION	DURATION	LANGUAGE
Full Time Master degree	Barcelona, Spain	9 months (1 academic year)	English

ACCREDITATION	CREDITS	INTAKE	FEES
by Barcelona Technology School	60 ECTs	October	17.000€

PAID INTERNSHIPS & DIGITAL JOBS
BTS offers paid internships in leading digital companies to their students. Take advantage of the BTS ecosystem and get a professional experience during & after the program.

Ask for information: ✉ info@barcelonaitschool.com   📞 +34 933 041 721

73% of all jobs in the next **5 years** will require technology skills

Source: US-BLS Employment Projections

Introduction to Software Development. Pre-Course

For entry students without technical background that want to enroll the Master in Big Data Solutions.

TYPE	STARTS	DURATION	FEES
Full time	September 2016	4 weeks	2.200€

Technology background is not mandatory

Contents Introduction to Software Development

Introduction to relational Database & SQL
1. Introduction to relational Database
2. Data management language
3. SQL (Structured Query Language)
4. Data definition language

Introduction to Java
1. Java basics
2. Flow of control
3. Composition and inheritance
4. Interfaces

Introduction to Object-oriented programming
1. Introduction to software development lifecycle
2. Fundamentals of programming
3. Object-oriented programming

My first development project
1. Hands on work

The aim of this course is to provide the base knowledge that any student needs to enroll the Master in Big Data Solutions.

How to apply

If you are passionate about Big Data and you would like to access to job opportunities, develop the best digital talent and have a master experience in Barcelona…we just ask you for 4 requirements:

1 Application Form

barcelonatechnologyschool.com

2 Motivation Letter & CV

Candidates must send to the admissions office their CV as well as a motivation letter explaining how they think the digital industry will be in the next five years and how they could contribute to the digital transformation.

You can submit this documentation directly to info@barcelonaitschool.com

3 Interview

Our admission board, as well as the director of the program, will analyze your candidature and if you meet the profile of Barcelona Technology School, we will call you to have a chat.

4 Payment

To ensure your place on the Master, you must secure it by making the reservation payment.

MBDS

Data-Driven Busines, Statistics & programming, Data Science, Algorithms for data science, Infrastructure & Tools, Data Visualization & explotation, Digital innovation, Digital & Mobile Business and Entrepreneurship.

Full-Time Program

Barcelona

9 Months

English

Intake: October 2016

60 ECTs

17,000€

Awarded by Barcelona Technology School.

Admissions Office

+34 933 041 721
info@barcelonatechnologyschool.com
www.barcelonatechnologyschool.com

"We live in a data-driven world. Increasingly, the efficient operation of organizations across sectors relies on the effective use of vast amounts of data.

Making sense of big data is a combination of organizations having the tools, skills and more importantly, the mindset to see data as the new "oil"fueling a company.

Unfortunately, the technology has evolved faster than the workforce skills to make sense of it and organizations across sectors must adapt to this new reality or perish."

Andreas Weigend
Former Chief Scientist Amazon.com

why **B**TS

1 Certification awarded by Barcelona Technology School.

2 Professional experience during the Masters through paid Internships & Job Opportunities.

3 Ecosystem of top digital companies and tech labs.

GREAT CAREERS ARE WAITING FOR BARCELONA TECHNOLOGY SCHOOL GRADUATES

4 International environment of tech people from all over the world.

5 Development of the most demanded digital skills.

6 Beach & sports club, social and sports installation located on the beachfront of Barcelona.

Information and admissions
info@barcelonatechnologyschool.com
(+34) 93 304 17 21

Location
Barcelona. Almogàvers 123
Barcelona's Technological
district (22@)

BARCELONA

Barcelona Technology
School

BTS

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