

Executive Development Program

Data Science and Big Data for IT



Executive Development Program

Data science and big data for IT

- » Modality: online
- » Duration: 4 months
- » Certificate: TECH Global University
- » Credits: 10 ECTS
- » Schedule: at your own pace
- » Exams: online
- » Target Group: graduates and professionals with demonstrable experience in the sector

Website: www.techtute.com/us/school-of-business/executive-development-program/executive-development-program-data-science-big-data-it

Index

01

Welcome

p. 4

02

Why Study at TECH?

p. 6

03

Why Our Program?

p. 10

04

Objectives

p. 14

05

Structure and Content

p. 18

06

Methodology

p. 24

07

Our Students' Profiles

p. 32

08

Course Management

p. 36

09

Impact on Your Career

p. 44

10

Benefits for Your Company

p. 48

11

Certificate

p. 52

01 Welcome

The amount of data generated worldwide is exorbitant and translating these contents into useful information that adds value to a business is of utmost importance for its development and growth. Professionals working in Big Data Science and IT are becoming increasingly in demand, which is an excellent opportunity for those who want to update their knowledge in this area. With this program, the student will acquire the knowledge and skills that will allow them to implement the necessary methods to systematize the technological innovation processes linked to the business objectives.



Executive Development Program in Data Science and Big Data for IT
TECH Global University



“

The figure of the strict, inflexible and authoritarian manager has become obsolete. A new profile has emerged, one that is much more in line with new trends and stands out for being technologically savvy, practicing active listening and being self-critical of their work"

02

Why Study at TECH?

TECH is the world's largest 100% online business school. It is an elite business school, with a model based on the highest academic standards. A world-class centre for intensive managerial skills training.



“

TECH is a university at the forefront of technology, and puts all its resources at the student's disposal to help them achieve entrepreneurial success"

At TECH Global University



Innovation

The university offers an online learning model that combines the latest educational technology with the most rigorous teaching methods. A unique method with the highest international recognition that will provide students with the keys to develop in a rapidly-evolving world, where innovation must be every entrepreneur's focus.

"Microsoft Europe Success Story", for integrating the innovative, interactive multi-video system.



The Highest Standards

Admissions criteria at TECH are not economic. Students don't need to make a large investment to study at this university. However, in order to obtain a qualification from TECH, the student's intelligence and ability will be tested to their limits. The institution's academic standards are exceptionally high...

95% | of TECH students successfully complete their studies



Networking

Professionals from countries all over the world attend TECH, allowing students to establish a large network of contacts that may prove useful to them in the future.

100,000+
executives trained each year

200+
different nationalities



Empowerment

Students will grow hand in hand with the best companies and highly regarded and influential professionals. TECH has developed strategic partnerships and a valuable network of contacts with major economic players in 7 continents.

500+ | collaborative agreements with leading companies



Talent

This program is a unique initiative to allow students to showcase their talent in the business world. An opportunity that will allow them to voice their concerns and share their business vision.

After completing this program, TECH helps students show the world their talent.



Multicultural Context

While studying at TECH, students will enjoy a unique experience. Study in a multicultural context. In a program with a global vision, through which students can learn about the operating methods in different parts of the world, and gather the latest information that best adapts to their business idea.

TECH students represent more than 200 different nationalities.



TECH strives for excellence and, to this end, boasts a series of characteristics that make this university unique:



Analysis

TECH explores the student's critical side, their ability to question things, their problem-solving skills, as well as their interpersonal skills.



Academic Excellence

TECH offers students the best online learning methodology. The university combines the Relearning method (a postgraduate learning methodology with the highest international rating) with the Case Study. A complex balance between tradition and state-of-the-art, within the context of the most demanding academic itinerary.



Economy of Scale

TECH is the world's largest online university. It currently boasts a portfolio of more than 10,000 university postgraduate programs. And in today's new economy, **volume + technology = a groundbreaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.



Learn with the best

In the classroom, TECH's teaching staff discuss how they have achieved success in their companies, working in a real, lively, and dynamic context. Teachers who are fully committed to offering a quality specialization that will allow students to advance in their career and stand out in the business world.

Teachers representing 20 different nationalities.



At TECH, you will have access to the most rigorous and up-to-date case studies in the academic community"

03

Why Our Program?

Studying this TECH program means increasing the chances of achieving professional success in senior business management.

It is a challenge that demands effort and dedication, but it opens the door to a promising future. Students will learn from the best teaching staff and with the most flexible and innovative educational methodology.



“

We have highly qualified teachers and the most complete syllabus on the market, which allows us to offer you training of the highest academic level"

This program will provide students with a multitude of professional and personal advantages, particularly the following:

01

A significant career boost

By studying at TECH, students will be able to take control of their future and develop their full potential. By completing this program, students will acquire the skills required to make a positive change in their career in a short period of time.

70% of participants achieve positive career development in less than 2 years.

02

Develop a strategic and global vision of companies

TECH offers an in-depth overview of general management to understand how each decision affects each of the company's different functional areas.

Our global vision of companies will improve your strategic vision.

03

Consolidate the student's senior management skills

Studying at TECH means opening the doors to a wide range of professional opportunities for students to position themselves as senior executives, with a broad vision of the international environment.

You will work on more than 100 real senior management cases.

04

Take on new responsibilities

The program will cover the latest trends, advances and strategies, so that students can carry out their professional work in a changing environment.

45% of graduates are promoted internally.

05

Access to a powerful network of contacts

TECH connects its students to maximize opportunities. Students with the same concerns and desire to grow. Therefore, partnerships, customers or suppliers can be shared.

You will find a network of contacts that will be instrumental for professional development.

06

Thoroughly develop business projects

Students will acquire a deep strategic vision that will help them develop their own project, taking into account the different areas in companies.

20% of our students develop their own business idea.

07

Improve soft skills and management skills

TECH helps students apply and develop the knowledge they have acquired, while improving their interpersonal skills in order to become leaders who make a difference.

Improve your communication and leadership skills and enhance your career.

08

Be part of an exclusive community

Students will be part of a community of elite executives, large companies, renowned institutions, and qualified professors from the most prestigious universities in the world: the TECH Global University community.

We give you the opportunity to train with a team of world renowned teachers.

04

Objectives

With innovative content and the best teaching methodology on the market, this program has been designed with the main objective of promoting student learning, achieving a higher level of training that will allow them to access management positions in technology businesses. A goal that will be achieved thanks to the efforts of the students and the high quality of this degree program.



“

You will be able to apply the most innovative technologies in your daily practice"

TECH makes the goals of their students their own goals too
Working together to achieve them

The Executive Development Program in Data Science and Big Data for IT qualifies students to:

01

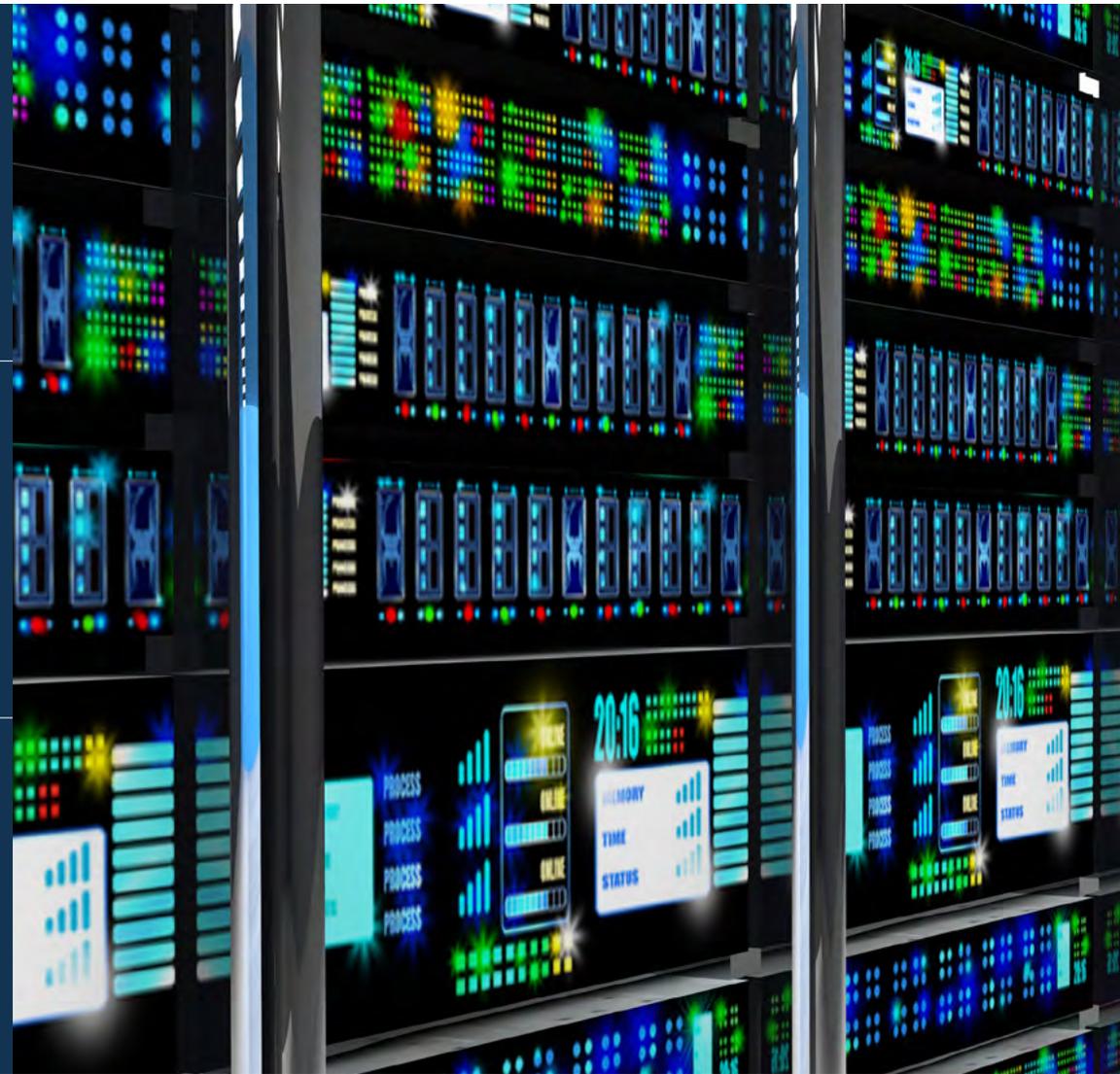
Implement methods to systematize technological innovation processes linked to the needs of the company

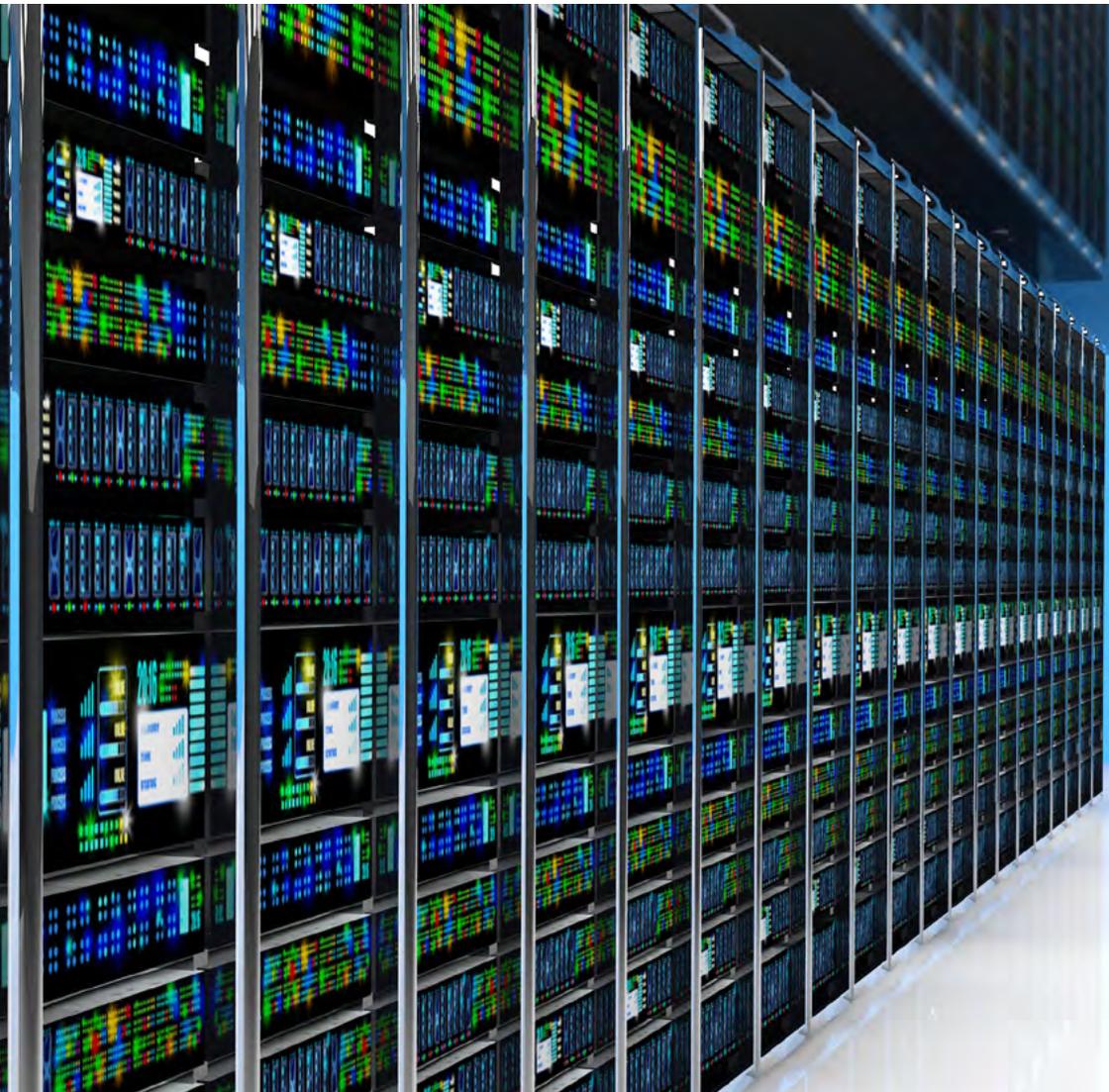
02

Assess the status, positioning and maturity of information technologies in business environments

03

Adopt strategic governance models for information technologies integrated and harmonized with corporate strategy and management





04

Participate in projects related to ICT management, innovation and research development

05

Describe how business intelligence and Big Data information systems operate and their main utilities and components used to provide information and knowledge in order to improve decision making

06

Explain new trends in business intelligence, in particular the Big Data phenomenon

05

Structure and Content

The Executive Development Program in Data Science and Big Data for IT from TECH Global University has been custom designed for students. Therefore, it is taught in a 100% online format so that you can choose the time and place that best suits your availability, schedule and interests. A program that takes place over 4 months and is intended to be a unique and stimulating experience that lays the foundation for your success in the management of technology businesses.



“

A totally new program that adapts to your needs so that you can combine your studies with the rest of your obligations"

Syllabus

New technologies have favored the emergence of information systems that are essential for the development of IT businesses. The large amount of data currently handled and the need to convert it into relevant information for organizations has led to an increase in the number of professionals interested in improving their skills in this field.

For this reason, this program is proposed, thanks to which students will be able to access specialized knowledge that will allow them to get up to date in Data Science and Big Data. Two aspects that are absolutely relevant nowadays at a business level and that are a great added value for professionals in the sector.

A study plan that adapts to the needs of the students and that, therefore, is offered in a 100% online format, so that they are the only ones in charge of organizing their study time, according to their needs and requirements. This is essential in today's society, where more and more professionals are choosing to expand their knowledge with high-quality programs.

This program takes place over 4 months and is divided into 3 modules:

Module 1	Business Intelligence and Data Analysis
Module 2	Data Science
Module 3	Big Data



Where, When and How is it Taught?

TECH offers the possibility of developing this Executive Development Program in Data Science and Big Data for IT completely online. Over the course of 4 months, you will be able to access all the contents of this program at any time, allowing you to self-manage your study time.

A unique, key, and decisive educational experience to boost your professional development and make the definitive leap

Module 1. Business Intelligence and Data Analysis

1.1. Data Science and Big Data

- 1.1.1. Impact of Big Data and Data Science on Business Strategy
- 1.1.2. Introduction to Command Line
- 1.1.3. Data Science Problems and Solutions

1.2. Data Hacking Languages

- 1.2.1. SQL Databases
- 1.2.2. Introduction to Python
- 1.2.3. Programming in R

1.3. Statistics

- 1.3.1. Introduction to Statistics
- 1.3.2. Linear and Logistic Regression
- 1.3.3. PCA and Clustering

Module 2. Data Science

2.1. Machine Learning

- 2.1.1. Model Selection and Regularization
- 2.1.2. Random Trees and Forests
- 2.1.3. Processing Natural Language

2.2. Data Science Success Stories

- 2.2.1. Customer Segmentation Using the RFM Model
- 2.2.2. Experiment Design Application
- 2.2.3. Supply Chain Value: Forecasting
- 2.2.4. Business Intelligence

Module 3. Big Data

3.1. Big Data

- 3.1.1. Hadoop
- 3.1.2. Spark
- 3.1.3. Collaborative Recommendation and Filtering Systems

3.2. Hybrid Architectures in Big Data

- 3.2.1. Lambda Architecture
- 3.2.2. Kappa Architecture
- 3.2.3. Apache Flink and Practical Implementations
- 3.2.4. Amazon Web Services

3.3. Big Data in the Cloud

- 3.3.1. AWS: Kinesis
- 3.3.2. AWS: DynamoSDB
- 3.3.3. Google Cloud Computing
- 3.3.4. Google BigQuery



A fundamental program to help you reach the professional elite"



06

Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





“

Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

TECH Business School uses the Case Study to contextualize all content

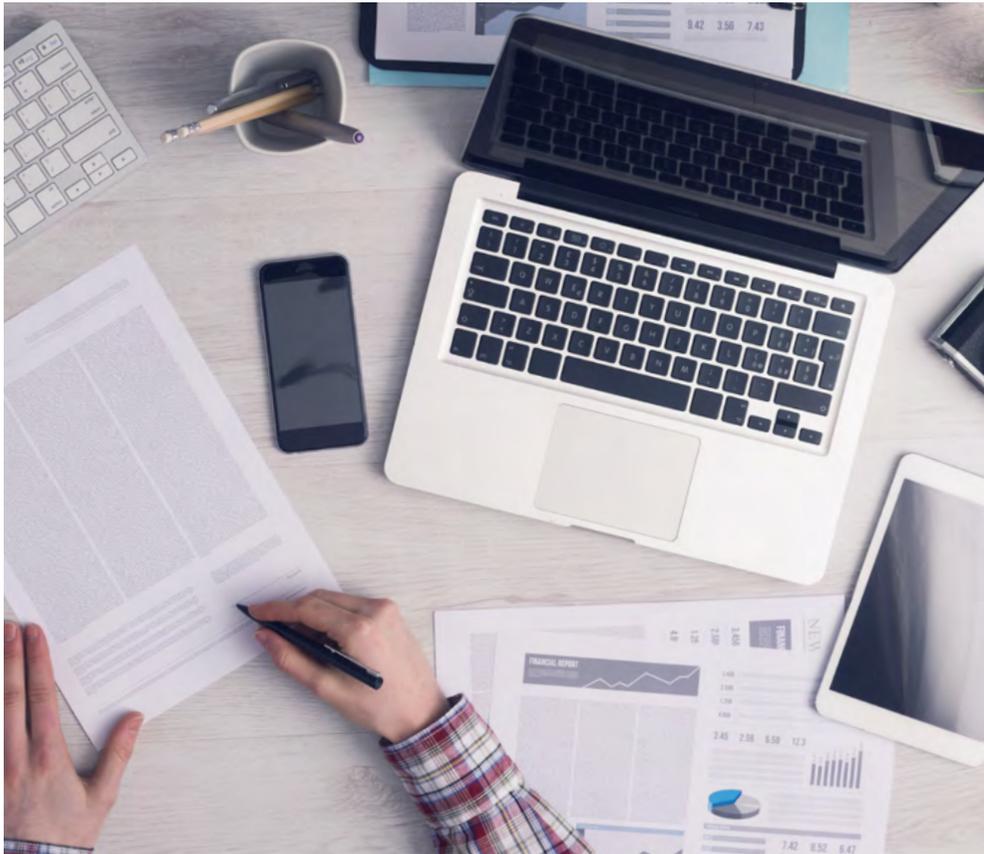
Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”



This program prepares you to face business challenges in uncertain environments and achieve business success.



Our program prepares you to face new challenges in uncertain environments and achieve success in your career.

A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch to present executives with challenges and business decisions at the highest level, whether at the national or international level. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and business reality is taken into account.

“ *You will learn, through collaborative activities and real cases, how to solve complex situations in real business environments”*

The case method has been the most widely used learning system among the world's leading business schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question we face in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They must integrate all their knowledge, research, argue and defend their ideas and decisions.

Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

Our online system will allow you to organize your time and learning pace, adapting it to your schedule. You will be able to access the contents from any device with an internet connection.

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our online business school is the only one in the world licensed to incorporate this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

With this methodology we have trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, markets, and financial instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

Relearning will allow you to learn with less effort and better performance, involving you more in your specialization, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation to success.

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



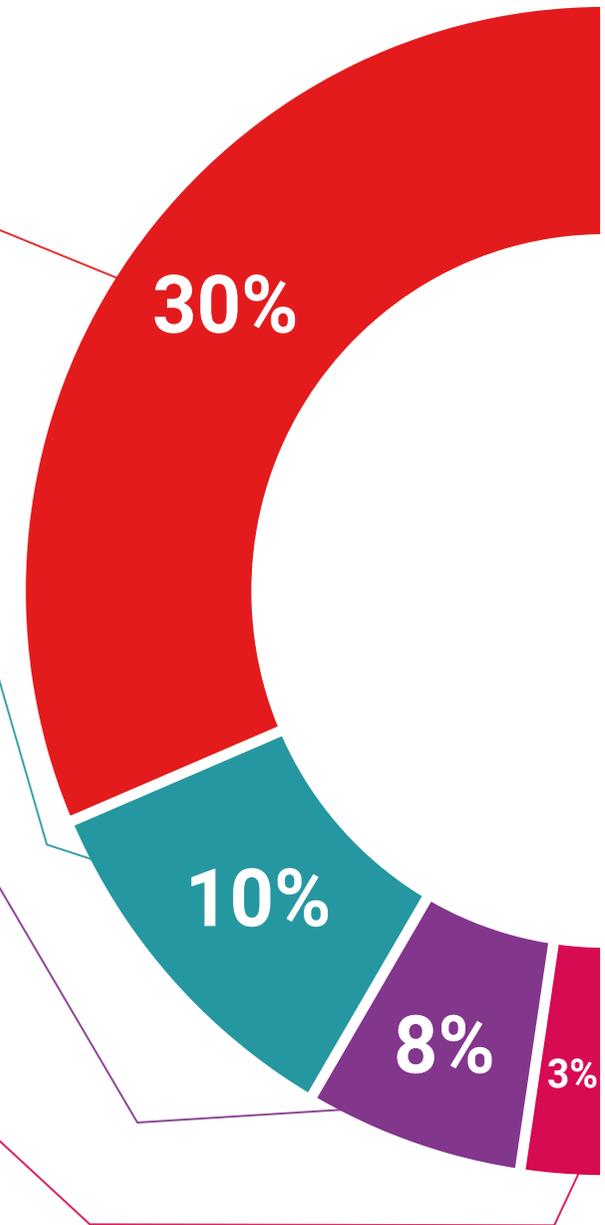
Management Skills Exercises

They will carry out activities to develop specific executive competencies in each thematic area. Practices and dynamics to acquire and develop the skills and abilities that a high-level manager needs to develop in the context of the globalization we live in.



Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





Case Studies

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best senior management specialists in the world.



Interactive Summaries

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Testing & Retesting

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



07

Our Students' Profiles

The Executive Development Program in Data Science and Big Data for IT is a program aimed at management professionals in IT and related areas who want to update their knowledge, discover new ways to manage data and information and advance their professional careers. It is a specialized program for Chief Information Officers, managers with ICT responsibility, managers from other areas with interest in innovation and development of ICT projects, Chief Technology Officers and systems managers.





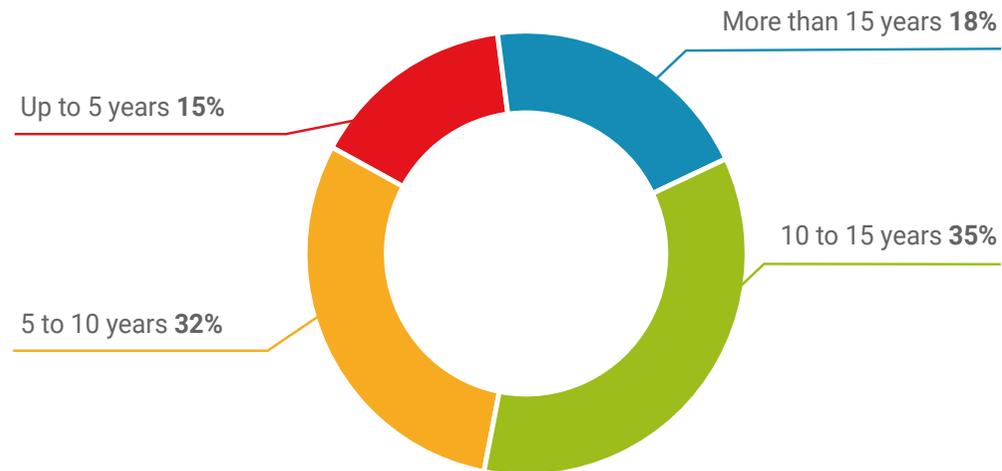
“

If you have experience in the financial sector and are looking for an interesting career boost while continuing to work, then this is the program for you”

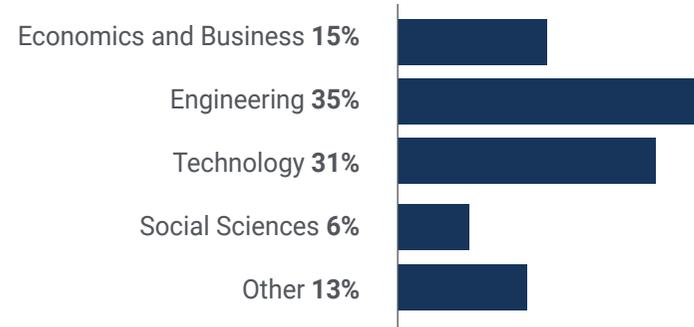
Average Age

Between **35** and **45** years old

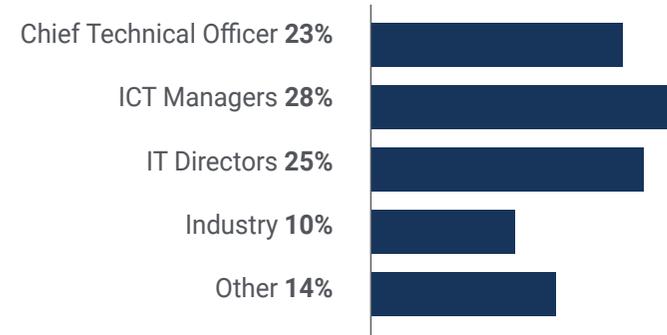
Years of Experience



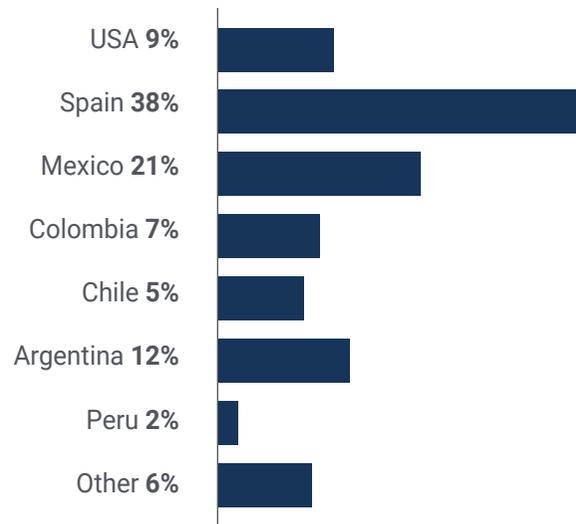
Training



Academic Profile



Geographical Distribution



Luis Sánchez Ortiz

IT Manager

"This program has been a key tool in my professional and personal development in the IT sector. In my case, it has helped me to understand the new technology at our disposal in this field and how best to put it into practice in my profession. I would definitely recommend it to all my fellow professionals in the industry"

08

Course Management

TECH has professionals specialized in each area of knowledge, who contribute their work experience to this program. A multidisciplinary team with recognized prestige has joined forces to offer students all their knowledge in this field.



“

Our teaching team who are experts in Data Science and Big Data for IT, will help you succeed in your profession"

International Guest Director

A technology leader with decades of experience in major technology multinationals, Rick Gauthier has developed prominently in the field of cloud services and end-to-end process improvement. He has been recognized as a leader and manager of highly efficient teams, showing a natural talent for ensuring a high level of engagement among his employees.

He possesses innate gifts in strategy and executive innovation, developing new ideas and backing his success with quality data. His background at Amazon has allowed him to manage and integrate the company's IT services in the United States. At Microsoft he has led a team of 104 people, responsible for providing corporate-wide IT infrastructure and supporting product engineering departments across the company.

This experience has allowed him to stand out as a high-impact manager with remarkable abilities to increase efficiency, productivity and overall customer satisfaction.



Mr. Gauthier, Rick

- Regional IT Director - Amazon, Seattle
- Senior Program Manager at Amazon
- Vice President, Wimmer Solutions
- Senior Director of Productive Engineering Services at Microsoft
- Degree in Cybersecurity from Western Governors University
- Technical Certificate in Commercial Diving from Divers Institute of Technology
- B.S. in Environmental Studies from The Evergreen State College

“

Thanks to TECH you will be able to learn with the best professionals in the world”

Management



Mr. Santana, Gustavo

- ♦ Engineer General Manager of Multiconversión Roi Agency
- ♦ Consulting and implementation of digital strategies aimed at profitability



09

Impact on Your Career

TECH is aware that studying a program like this entails great economic, professional and, of course, personal investment. The ultimate goal of this great effort should be to achieve professional growth. And, therefore, the academic institution puts all its resources at your disposal to help you specialize in a high-demand sector, achieving career improvement without making great efforts.



“

One of TECH's main challenges is to help you achieve professional success. And it achieves this by offering you quality academic resources"

Are you ready to take the leap? Excellent professional development awaits you.

TECH's Executive Development Program in Data Science and Big Data for IT is an intensive degree that prepares students to face business challenges and decisions at the technological level, both nationally and internationally. The main objective is to promote personal and professional growth, helping students achieve success.

A specific program to reach the professional elite.

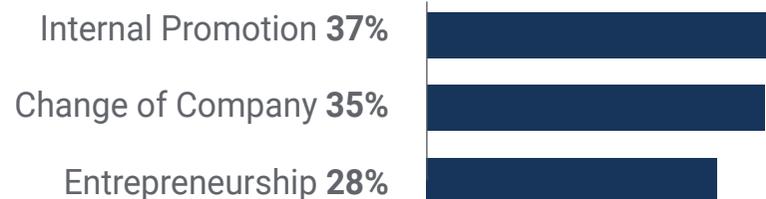
TECH is committed to quality specialization so that students can achieve professional success and this Executive Development Program is an example of this

This program will give you the necessary tools to develop professionally in IT management and leadership

When the change occurs



Type of change



Salary increase

This program represents a salary increase of more than **25.22%** for our students.



10

Benefits for Your Company

The Executive Development Program in Data Science and Big Data for IT helps to elevate the organization's talent to its maximum potential through the specialization of high-level leaders. To this end, it offers them a very complete program, with which they will learn to use the latest techniques and tools that will improve production processes and, therefore, the performance of the companies.





“

*A superior specialization that will help
you give your business a boost”*

Developing and retaining talent in companies is the best long-term investment.

01

Intellectual Capital and Talent Growth

Bring new concepts, strategies and perspectives to the company that can bring about relevant changes in the organization.

02

Retaining High-Potential Executives to Avoid Talent Drain

This program strengthens the link between the company and the manager and opens new avenues for professional growth within the company.

03

Building Agents of Change

You will be able to make decisions in times of uncertainty and crisis, helping the organization overcome obstacles.

04

Increased International Expansion Possibilities

Thanks to this program, the company will be in contact with the main markets of the world economy.



05

Project Development

You will be able to work on a current project or develop new projects in the field of R&D or Business Development within the company.

06

Increased Competitiveness

This Executive Development Program will equip students with the competencies to take on new challenges and drive the organization forward.

11

Certificate

The Executive Development Program in Data Science and Big Data for IT guarantees, in addition to the most rigorous and up-to-date education, access to a Executive Development Program issued by TECH Global University.





“

Successfully complete this program and receive your university diploma without travel or laborious paperwork”

This program will allow you to obtain your **Executive Development Program diploma in Data Science and Big Data for IT** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

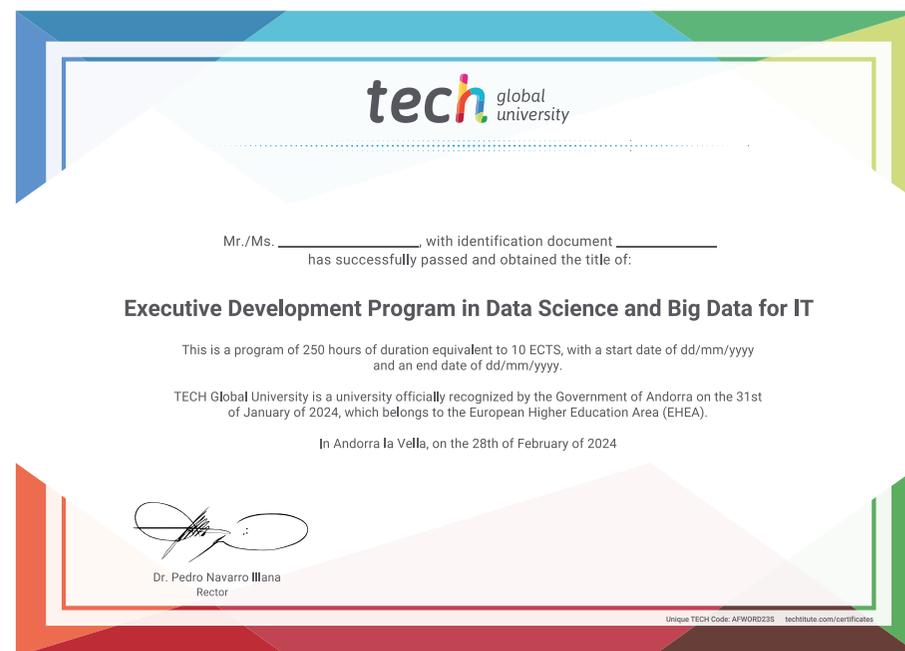
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Executive Development Program in Data Science and Big Data for IT**

Modality: **online**

Duration: **4 months**

Accreditation: **10 ECTS**



*Apostille Convention. In the event that the student wishes to have their paper diploma issued with an apostille, TECH Global University will make the necessary arrangements to obtain it, at an additional cost.



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