

# Postgraduate Certificate Big Data Applied in Sport

Endorsed by the NBA



Prototipo  
original de  
reloj wearable

2006

Nike y Apple lanzan la aplicación Nike+ para entrenamiento personal

2013

- Utilización de estadísticas por la Selección Mexicana de fútbol
- Golden State Warriors instala un sistema de cámaras para mejorar su desempeño

- Federación Alemana de Fútbol contrata SAP y gana el Mundial de Brasil
- Acuerdo del Real Madrid con Microsoft

El Tour de Francia obtiene datos en tiempo real de las bicicletas, sincronizando la información

tech technological university



## Postgraduate Certificate

### Big Data Applied in Sport

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 8h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtute.com/us/journalism-communication/postgraduate-certificate/big-data-applied-sport](http://www.techtute.com/us/journalism-communication/postgraduate-certificate/big-data-applied-sport)

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# 01

# Introduction

The collection and interpretation of Big Data is a fundamental tool in journalism, and in the sports sector in particular it is of prime necessity for the professional to handle it correctly. This program is the best specialization tool that students can choose in order to specialize in this sector. With the latest educational technology, the prestige of TECH and the most effective 100% online methodology in the current academic market, graduates will acquire unique competencies and skills. In just 6 weeks, and with the most complete theoretical and practical course, you will have access to the most exclusive and updated content for your specialization.





“

*A high-quality program that will provide you with all the key elements to manage Big Data applied to journalistic communication”*

Data Journalism is a specialty that has developed a great relevance in the media, due to the need to collect, analyze and interpret large amounts of data, through the use and management of specialized applications and software. New technologies are having an impact on the processes of news production, presentation and quality, although they are also beginning to play a decisive role in the productivity and efficiency of content production, to the point that some media are using bots to generate information or reports automatically.

In order to produce more understandable, attractive, relevant and accurate information, the communication professional will be introduced to the techniques for processing large volumes of data and to become familiar with the terminology related to Big Data, Artificial Intelligence or Machine Learning. In this sports specialization diploma, specifically, this module addresses the importance of statistics, the most relevant sources of data information and how to use them to dissect the game and interpret it in order to provide the basis for quality journalistic content. Finally, it analyzes the usual sources of sports journalists and reveals the particularities, dangers and difficulties of their relationship with them.

This way, in this course, students will find the innovative Relearning method, which allows them to advance in a much more natural way in the acquisition of concepts throughout the duration of the program, eliminating the tedious task of memorizing used in obsolete methodologies. You only need an electronic device with an Internet connection to access the syllabus of this program. In addition, this methodology gives you the freedom to distribute your course load, making it even easier to combine this specialization with work and/or personal responsibilities.

This **Postgraduate Certificate in Big Data Applied in Sports** contains the most complete and up-to-date program on the market. Its most notable features are:

- ♦ The latest technology in online teaching software
- ♦ A highly visual teaching system, supported by graphic and schematic contents that are easy to assimilate and understand
- ♦ Practical cases presented by practising experts
- ♦ State-of-the-art interactive video systems
- ♦ Teaching supported by telepractice
- ♦ Continuous updating and recycling systems
- ♦ Autonomous learning: full compatibility with other occupations
- ♦ Practical exercises for self-evaluation and learning verification
- ♦ Support groups and educational synergies: questions to the program, debate and knowledge forums
- ♦ Communication with the teacher and individual reflection work
- ♦ Content that is accessible from any fixed or portable device with an Internet connection
- ♦ Supplementary documentation databases are permanently available, even after the program



*The proven experience of  
TECH is here to help in this  
comprehensive program”*

“ *A program supported by the best technology, which will allow you to learn in a fluid and efficient way*”

The team of professors in the Big Data Applied in Sports program have extensive experience in teaching at the university level, both in undergraduate and graduate programs, and extensive experience as working professionals, which allows them as professors to know, first hand, the profound transformation undergone by the communication sector. Their direct experiences, their knowledge and the analytical capacity of those who hold a managerial position are the best source to grasp the key to the present and the future of a vocational and exciting profession for those who love sports and communication.

The methodology of the expert offered at TECH Technological University, in online format, allows students to break down the barriers imposed by work obligations and the difficult balance between work and personal life. Accessing face-to-face learning is practically impossible for those involved in the daily demands of work.

All this educational summary makes this program a qualification of specialization in Big Data Applied in Sports, comply with all the aspects that are relevant and essential to turn the Journalism professional into a real expert in the fields related to Big Data Applied in Sports.

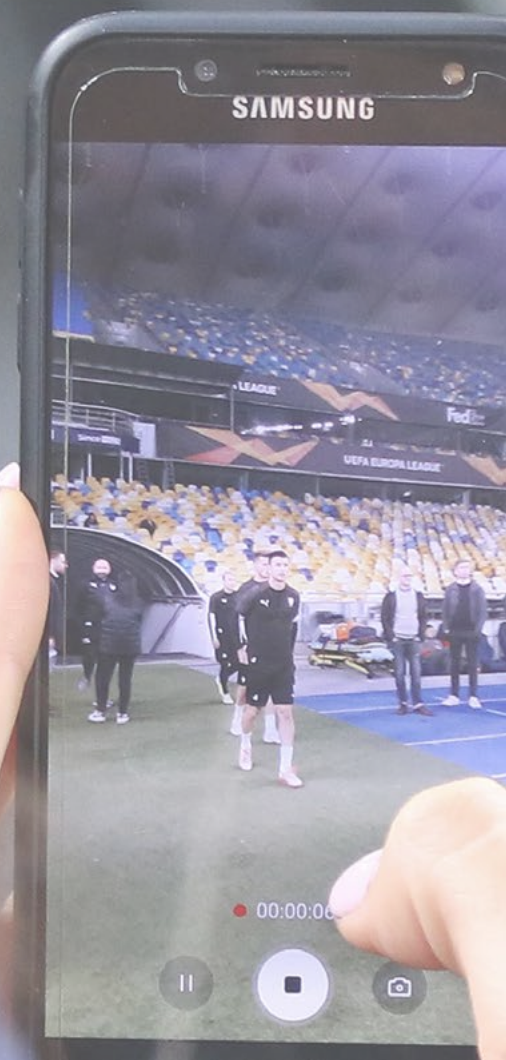
*Learn all the aspects that the successful political communication professional must master.*

*With professors who are experts in this area of work, this program is a unique opportunity for professional development.*



# 02 Objectives

This Postgraduate Certificate in Big Data Applied in Sports is aimed at obtaining a degree of specialization that allows a journalism professional to develop their career in this field in an optimal way. For this purpose, we have developed the essential theoretical content that will serve as a foundation for the practice, which will be developed intensively throughout the program.





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*Sports communication in radio broadcasting developed throughout a program of high-quality teaching and content”*



## General Objectives

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- ◆ Compile, manage and interpret relevant data through specific digital tools
- ◆ Master tools and resources to visualize data in a clear and attractive way
- ◆ Analyze sports events in-depth
- ◆ Establish relationships with the main sources of investigative Sports Journalism

“

*Our goal is simple: to offer you a high-quality program, with the most developed teaching resources so that you can achieve the best results with little effort”*





## Specific Objectives

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- ♦ Analyze sports from a Data Journalism perspective
- ♦ Select appropriate data sources for specific statistical news items
- ♦ Support information or opinions with relevant data
- ♦ Compile, process, manage, filter and compare statistics
- ♦ Access, discriminate and publish confidential information and leaks

03

# Course Management

The Postgraduate Certificate in Big Data Applied in Sports is taught by professionals with extensive experience in journalism and teaching, who will try to give you a real vision of the profession. For this reason, they have developed an educational program specially focused on professional development from a perspective that is totally tailored to the reality of the sector.



“

*Learn from experts in the field and start to progress in a dynamic and interesting profession”*

## International Guest Director

Born in Puerto Rico, Alvaro Martin received his degree from Harvard University and an his MBA from Harvard Business School.

Martin is the only original Spanish-language ESPN network anchor who has remained with the network ever since, covering all NBA events.

He also has the distinction of being the first talent to serve as a dual-language sports anchor in ESPN's history, is ESPN's most experienced NBA commentator in either English or Spanish, has informed and entertained Spanish-speaking NBA basketball fans around the world for more than two decades, has been nominated for a Spanish-language Emmy Award as a sports broadcaster, and has also hosted 20 NBA Finals for ESPN and ABC in their Spanish-language versions.



## D. Martín, Álvaro

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- Basketball analyst and commentator with extensive international experience
- Bachelor's degree from Harvard University
- Master's Degree in Business Administration from Harvard Business School

“

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

## International Guest Director

Born and raised in Bayamon, Puerto Rico, “El Coach” played basketball and was a middle distance runner in his youth. After earning his Bachelor’s Degree in Business Administration and Physical Education, he began his coaching career in youth programs, eventually coaching at all levels in Puerto Rico.

After an outstanding career as a **Basketball Coach** in Puerto Rico, Carlos Morales came to **ESPN** in February 2000 to serve as a **Basketball Analyst** in Spanish, bringing all his experience in **NBA** events.

He is currently **Assistant Coach of the Puerto Rico Women’s National Team** and is a member of the **National Association of Basketball Coaches** and the **World Association of Basketball Coaches**.





## Dr. Morales, Carlos

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- Assistant Coach of the Puerto Rico Women's Basketball National Team.
- Basketball Analyst at ESPN
- Member: National Association of Basketball Coaches, World Association of Basketball Coaches
- Bachelor's Degree in Business Administration and Physical Education

“

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

## Management



### Mr. Pérez Zorrilla, Carlos

- ♦ Head of Department at Estadio Deportivo Newspaper
- ♦ Graduate in Journalism from the Andalusian Center for Business Studies (CEADE), Seville
- ♦ Head of Digital Content at Estadio Deportivo Newspaper
- ♦ Website Editor for Tourism and Sports in Andalusia
- ♦ Collaborator of Onda Cero Sevilla
- ♦ Collaborator of Canal Sur Radio
- ♦ Professor of the Professional Master's Degree in Sports Journalism at the University of Seville, CEPO Sport Group, FiebreFútbol and Nerdsfy

## Professors

### Ms. Chávez González, Luisa María

- ♦ Graduate in Journalism, University of Seville
- ♦ Trainee Editor at Diario de Sevilla
- ♦ Contributor to the program "It's not Friday yet", Sevilla FC Radio
- ♦ Trainee Editor at Estadio Deportivo
- ♦ Editor at Ooh! Jerez
- ♦ Contributor to the Decibelios AM website

### Mr. Adorna León, Joaquín

- ♦ Graduate in Information Sciences, specializing in Journalism, in the first graduating class of the Faculty of Information Sciences of the University of Seville
- ♦ Professor in the Module 'The Written Press' of the Master's Degree in Sports Journalism at the University of Seville.

### Mr. Palomo Armesto, Álvaro

- ♦ Website Content Writer at Medina Media
- ♦ Graduate in Journalism
- ♦ Multimedia Editor at Estadio Deportivo
- ♦ Head of Press at CD Patín Macarena
- ♦ Editor at El Correo de Andalucía
- ♦ Editor at El Diario de Sevilla

### Mr. García Collado, José Enrique

- ♦ Degree in Journalism, University of Seville
- ♦ Expert Course in Big Data Deportivo by the University of Valladolid
- ♦ Master's Degree in Community Management at CEDECO school
- ♦ Specialization course in Programmatic Advertising at Skiller Academy



# 04

## Structure and Content

The contents of this program have been developed by the different professors, with a clear purpose: ensure that our students acquire each and every one of the necessary skills to become true experts.

The content of this diploma will allow you to learn all aspects of the different disciplines involved in this area: a very comprehensive and well-structured program that will lead you to the highest standards of quality and success.





“

*Complete and efficient, this program is supported by a didactic structure that, in a progressive way, will lead you to the total mastery of this subject”*

## Module 1. Data and Investigative journalism

- 1.1. Data Journalism
  - 1.1.1. Journalistic Documentation
  - 1.1.2. Infographics
  - 1.1.3. Fact Checking
  - 1.1.4. Graphic Representation
  - 1.1.5. The Importance of Data Journalism Today
    - 1.1.5.1. Milestones in the Field in Recent Years
- 1.2. Statistics
  - 1.2.1. Concept and Uses
  - 1.2.2. Statistical Objectives
  - 1.2.3. Types of Statistics
  - 1.2.4. Application to Journalism
    - 1.2.4.1. Application to Sports Journalism
- 1.3. Smart Data Analysis
  - 1.3.1. Smart Data Classification
  - 1.3.2. Data Mining
- 1.4. Data Journalism Formats
  - 1.4.1. Internet, Press, TV, Radio
  - 1.4.2. Main Tools for Each Media
  - 1.4.3. How to Prepare an Online and Print Data Report
- 1.5. Introduction to Big Data
  - 1.5.1. Definition
    - 1.5.1.1. The Vs of Big Data
    - 1.5.1.2. Predictive Analysis
    - 1.5.1.3. Moneyball
    - 1.5.1.4. Big Data in Sport
- 1.6. Data Analysis and Interpretation Tools
  - 1.6.1. Excel
  - 1.6.2. SAP Predictive Analytics
  - 1.6.3. SAS Analytics
  - 1.6.4. Qlik View
  - 1.6.5. Tableau Public
  - 1.6.6. Penatho
  - 1.6.7. Klipfolio
  - 1.6.8. Sisense
  - 1.6.9. Cyfe
  - 1.6.10. Power BI
- 1.7. Artificial Intelligence
  - 1.7.1. The importance of Artificial Intelligence
  - 1.7.2. Artificial Intelligence in Sport
  - 1.7.3. Artificial Intelligence in Sports Journalism
- 1.8. Machine Learning
  - 1.8.1. Machine Learning in Sport
  - 1.8.2. Machine Learning in Journalism
  - 1.8.3. Artificial Neuronal Networks
  - 1.8.4. Deep Learning
  - 1.8.5. Glossary of Related Terms

- 1.9. Sources of Data Information in Sport
  - 1.9.1. Sources of Data Information in Soccer
    - 1.9.1.1. Transfermarkt
    - 1.9.1.2. SofaScore
    - 1.9.1.3. WhoScored
    - 1.9.1.4. Stats Zone
    - 1.9.1.5. Football-line ups
    - 1.9.1.6. Soccer Association
    - 1.9.1.7. World Referee
    - 1.9.1.8. WyScout
    - 1.9.1.9. InStat Scout
    - 1.9.1.10. ProFootball DB
  - 1.9.2. Sources of Data Information in Other Sports
- 1.10. Investigative Journalism
  - 1.10.1. Characteristics of Investigative Journalists
  - 1.10.2. Qualities of Investigative Journalists
  - 1.10.3. The Relationship with Sources
    - 1.10.3.1. Clubs
    - 1.10.3.2. Athletes
    - 1.10.3.3. Institutions
    - 1.10.3.4. Sports Managers
    - 1.10.3.5. Athletes' Agents
    - 1.10.3.6. The Exchange Market
  - 1.10.4. Filtration

“ A program that will take you through the necessary knowledge to compete with the best in your profession”

05

# 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"*

## 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”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



*The student will learn, through collaborative activities and real cases, how to solve complex situations in real business environments.*

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. 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 professional reality is taken into account.

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

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 will have to combine all their knowledge and research, and 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 8 different teaching elements in each lesson.

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

*In 2019, we obtained the best learning results of all online universities in the world.*

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 university is the only one in the world authorized to employ 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.

This methodology has 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, and financial markets and 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.



### Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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 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.



06

# Certificate

The Postgraduate Certificate in Big Data Applied in Sport guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.





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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*

This **Postgraduate Certificate in Big Data Applied in Sport** contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery\*.

The diploma issued by **TECH Technological University** will reflect the qualification obtained in the **Postgraduate Certificate**, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: **Certificate in Big Data Applied in Sport**

Official N° of hours: **150 h.**

Endorsed by the NBA



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

future  
health confidence people  
education information tutors  
guarantee accreditation teaching  
institutions technology learning  
community commitment  
personalized service innovation  
knowledge present  
development language  
virtual classroom



## Postgraduate Certificate Big Data Applied in Sport

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Dedication: 8h/week
- » Schedule: at your own pace
- » Exams: online

# Postgraduate Certificate Big Data Applied in Sport

Endorsed by the NBA

