



Exploratory Analysis and Business Data Processing

» Modality: online

» Duration: 6 months

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

» Target Group: computer engineers who wish to reorient their work towards the world of business intelligence, or established professionals in the field of BI who need to update, deepen and improve their skills and knowledge

 $We bsite: {\color{blue} www.techtitute.com/in/school-of-business/postgraduate-diploma/postgraduate-diploma-exploratory-analysis-business-data-processing} \\$

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01 **Welcome**

Society moves in a world of complex data that it needs to understand, and the best way to do this is through graphical representations. This makes it essential for companies to select analytical profiles, capable of optimizing the time and resources available to them. This is where data visualization comes into play, providing quick answers and helping to understand the stored information more easily. This program has been designed with the needs of professionals in mind to improve exploratory analysis and data processing in business. Therefore, through the use of programming languages, various essential tasks in data analytics are addressed and students will be equipped with the ability to summarize the information with statistics and graphs that reflect the conclusions of the analysis.







tech 08 | Why Study at TECH?

At TECH Technological 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+

200+

executives trained each year

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.



Why Study at TECH? | 09 tech

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.



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.



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 ground-breaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.



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



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.



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.



tech | Why Our Program?

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



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.



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.



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.



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.



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.



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.



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.



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 Technological University community.

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





tech 16 | Objectives

TECH makes the objectives of its students its own.

Working together to achieve them.

Postgraduate Diploma in Exploratory Analysis and Business Data Processing will enable the student to:



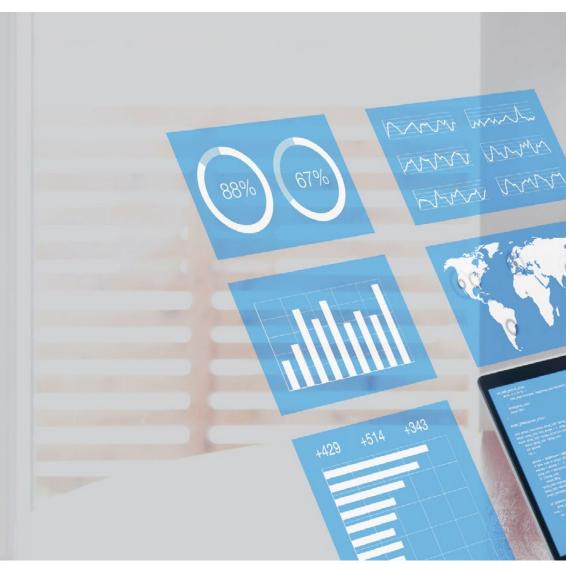
Analyze data visualization, its types and sets

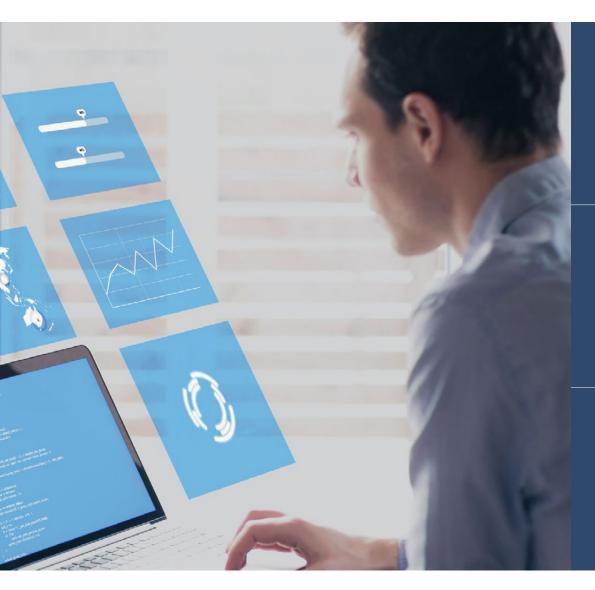


Determine the elements that make up a data visualization



Identify the different types of representation most commonly used in data analysis and the tools that exist to apply them







Address the future of data analysis



Examine data quality and define processes that include added value



Analyze a problem analytically, extracting quantitative and qualitative results



Present the information in a synthesized form, with graphs and statistics

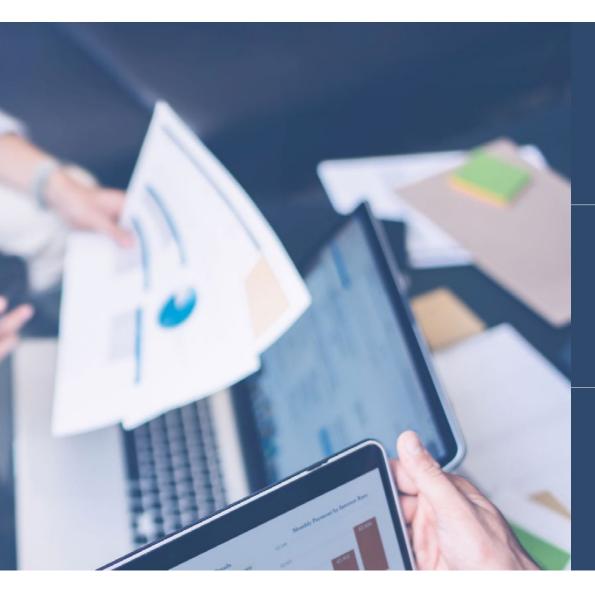


Develop an end-to-end process to draw conclusions from the exploitation of the information



Present digital marketing analytics and its methodology







Analyze the sessions of a website in order to better understand your customers



Establish a functional environment to get to know the user and the way they interact with the web



Generate reports and correctly interpret the data obtained





tech 22 | Structure and Content

Syllabus

The Postgraduate Diploma in Exploratory Analysis and Business Data Processing at TECH Technological University is an intensive program that prepares students to face challenges and business decisions in the field of digital data, its analysis, visualization and management.

Accordingly, the content of the Postgraduate Diploma in Exploratory Analysis and Business Data Processing is designed to promote control and strategic decision making in a successful business environment.

Over the course of 450 hours, the student analyzes a plethora of practical cases through individual and team work. It is, therefore, an authentic immersion in real business situations.

In this way, this Postgraduate Diploma deals in depth with the data treatment process, from its visualization to its usability in marketing, through a disruptive, complete and up-to-date perspective, focused on the resolution of the real needs of the business world.

It is designed for professionals to understand how to apply business data analysis successfully, from a strategic, international and innovative perspective.

A program fully designed for students, focused on their professional improvement, preparing them to achieve excellence in the digital business environment. A program that understands both the needs of the student and the company, through innovative content based on the latest trends, supported by the best educational methodology and an exceptional faculty.

This Postgraduate Diploma takes place over 6 months and is divided into 3 modules:

Module 1 Data Visualization

Module 2 Programming for Data Analysis

Module 3 Digital Marketing Analytics



Where, when and how is it taught?

TECH offers the possibility of taking this program completely online. Throughout the 6 months of training, 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.

tech 24 | Structure and Content

Module 1. Data Visualization										
1.1.1. 1.1.2.	Data Visualization Data Visualization Importance of Data Analysis and Visualization Evolution	1.2. The Design1.2.1. Use of Color1.2.2. Composition and Typography1.2.3. Recommendations	1.3. Types of Data1.3.1. Qualitative1.3.2. Quantitative1.3.3. Temporary Data	1.4. Data Sets1.4.1. Files1.4.2. Databases1.4.3. Open Data1.4.4. Streaming Data						
1.5.1. 1.5.2. 1.5.3. 1.5.4.	Common Types of Representation Columns Bars Lines Areas Dispersion	1.6. Advanced Types of Representation1.6.1. Circular1.6.2. Rings1.6.3. Bubbles1.6.4. Maps	 1.7. Application by Area 1.7.1. Political Science and Sociology 1.7.2. Science 1.7.3. Marketing 1.7.4. Health and Well-being 1.7.5. Meteorology 1.7.6. Business and Finance 	1.8. Storytelling1.8.1. Importance of Storytelling1.8.2. History of Storytelling1.8.3. Application of Storytelling						
1.9.1. 1.9.2. 1.9.3.		1.10. The Future of Data Visualization 1.10.1. Virtual Reality 1.10.2. Augmented Reality 1.10.3. Artificial Intelligence								
Modu	Ile 2. Programming for Data Analysis									
2.1. 2.1.1. 2.1.2.	Programming for Data Analysis Language for Data Analysis Evolution and Characteristics of the Main Tools Installation and Configuration	2.2. Types of Data 2.2.1. Basic Types 2.2.2. Complex Types 2.2.3. Other Structures	2.3. Structures and Operations2.3.1. Data Operations2.3.2. Control Structures2.3.3. File Operations	2.4. Data Extraction and Analysis2.4.1. Statistical Summaries2.4.2. Univariate Analysis2.4.3. Multivariate Analysis						
2.5.1. 2.5.2.	Visualisation Univariate Graphs Multivariable Graphs Other Charts of Interest	2.6. Pre-Processing2.6.1. The Importance of Data Quality2.6.2. Outlier Detection and Analysis2.6.3. Other Dataset Quality Factors	2.7. Advanced Pre-Processing2.7.1. Subsampling2.7.2. Resampling2.7.3. Dimensionality Reduction	2.8. Data Modeling2.8.1. Modeling Phases2.8.2. Division of the Data Set2.8.3. Metrics for Prediction						
2.9. 2.9.1. 2.9.2. 2.9.3.	Advanced Data Modeling Unsupervised Models Supervised Models Libraries for Modeling	2.10. Tools and Good Practices 2.10.1. Best Practices for Modeling 2.10.2. The Tools of a Data Analyst 2.10.3. Conclusion and Bookstores of Interest								

Structure and Content | 25 tech

Module 3. Digital Marketing Analytics										
3.1.2.	Web Analytics Web Analytics Use History Applicable Methodology	3.2. 3.2.1. 3.2.2. 3.2.3.	Google Analytics About Google Analytics Metrics vs. Dimension Measurement Objectives	3.3. 3.3.1. 3.3.2. 3.3.3.	Reports Basic Metrics Advanced Metrics or KPIs (Key Performance Indicators) Conversions	3.4.2.	Dimensions Campagin/Keyword) Source/Media Contents			
	Universal Analytics vs. Google Analytics 4 UA Differences vs. GA4 Advantages and Limitations Use of UA and GA4 Tools	3.6. 3.6.1. 3.6.2. 3.6.3.	Setting up Google Analytics Installation and Integration Structure of Universal Analytics: Accounts, Properties and Views Conversion Goals and Funnels		Purchase Analytics Behavior Analytics	3.8.2.	Advanced Reports Panels Personalized Reports APIs			
3.9.1. 3.9.2.	Segments Difference between Segment and Filter Types of Segments: Predefined / Customized Remarketing	3.10.1 3.10.2	Digital Analytics . Measurement . Implementation . Conclusions							



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.





tech 28 | Methodology

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.





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.

tech 30 | Methodology

Relearning Methodology

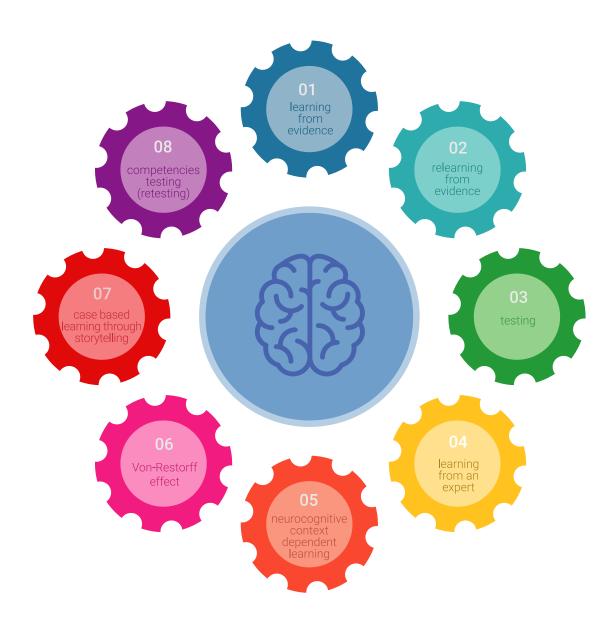
TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines different teaching elements in each lesson.

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.



Methodology | 31 tech

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.

tech 32 | Methodology

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.



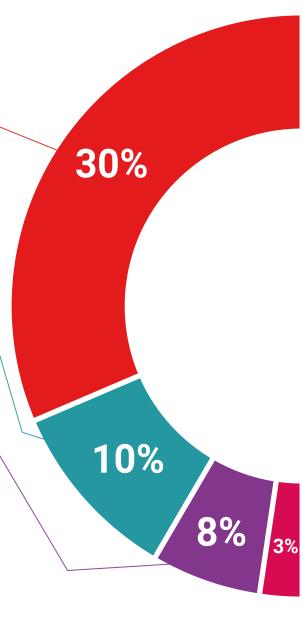
Management Skills Exercises

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.





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

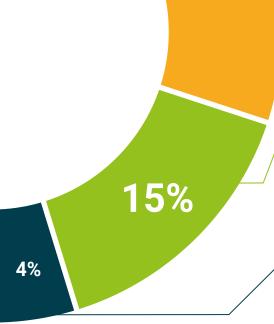
The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.



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.

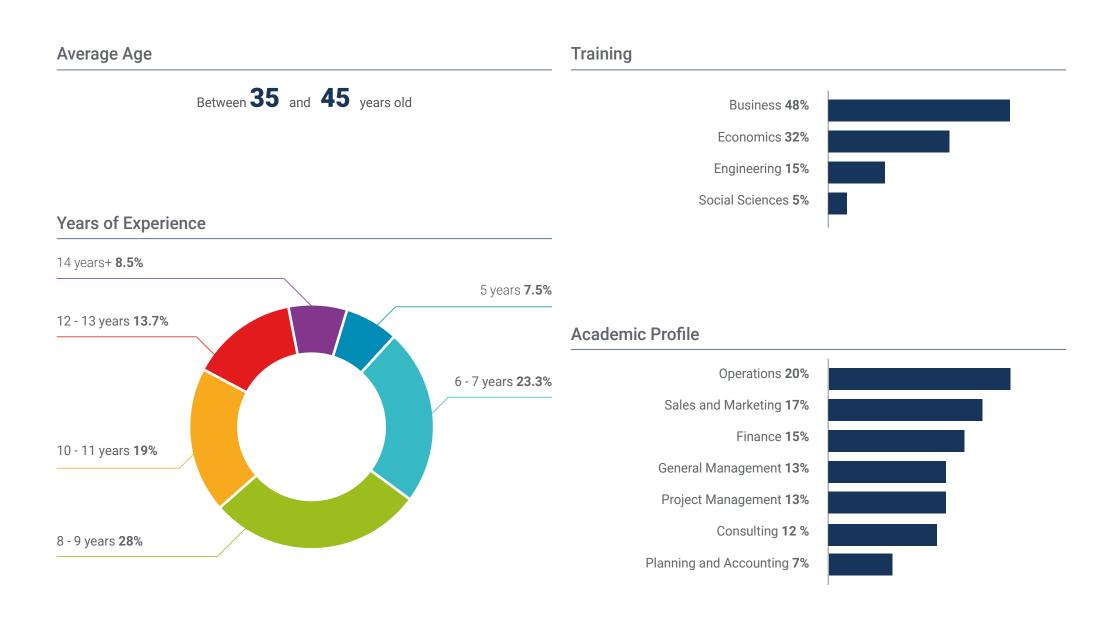


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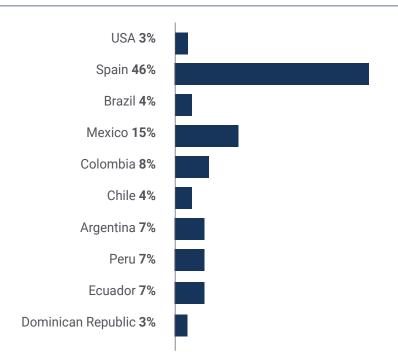


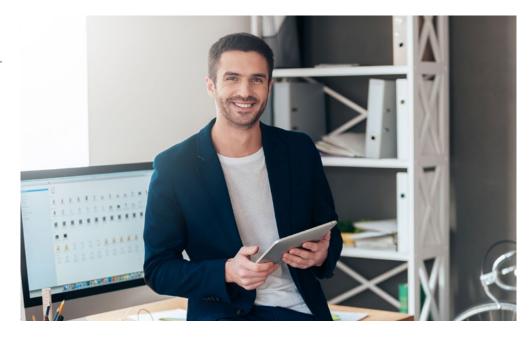


tech 36 | Our Students' Profiles



Geographical Distribution





Borja Rozas Pascual

Big Data Analyst

"This TECH Postgraduate Diploma has allowed me to make a niche for myself in a sector as competitive as the business sector. Thanks to the program's content, I have been able to find insights of great importance within the business data, so that I have achieved new business opportunities for the start-up in which I work. A great choice!"





International Guest Director

Mick Gram is synonymous with innovation and excellence in the field of Business Intelligence internationally. His successful career is linked to leadership positions in multinationals such as Walmart and Red Bull. Likewise, this expert stands out for his vision to identify emerging technologies that, in the long term, achieve an everlasting impact in the corporate environment.

On the other hand, the executive is considered a pioneer in the use of data visualization techniques that simplified complex sets, making them accessible and facilitating decision making. This ability became the pillar of his professional profile, transforming him into a desired asset for many organizations that bet on gathering information and generating concrete actions from them.

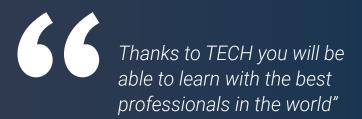
One of his most outstanding projects in recent years has been the Walmart Data Cafe platform, the largest of its kind in the world that is anchored in the cloud aimed at Big Data analysis. In addition, he has held the position of Director of Business Intelligence at Red Bull, covering areas such as Sales, Distribution, Marketing and Supply Chain Operations. His team was recently recognized for its constant innovation regarding the use of Walmart Luminate's new API for Shopper and Channel insights.

n terms of education, the executive has several Master's degrees and postgraduate studies at prestigious centers such as the University of Berkeley, in the United States, and the University of Copenhagen, in Denmark. Through this continuous updating, the Postgraduate Diploma has achieved cutting-edge competencies. Thus, he has come to be considered a born leader of the new global economy, centered on the impulse of data and its infinite possibilities.



D. Gram, Mick

- Business Intelligence Solutions Architect for Walmart Data Café
- Independent Business Intelligence and Data Science Consultant
- Business Intelligence Director at Capgemini
- Chief Analyst at Nordea
- Chief Business Intelligence Consultant for SAS
- Executive Education in Al and Machine Learning at UC Berkeley College of Engineering
- Executive MBA in e-commerce at the University of Copenhagen
- Bachelor's Degree and Professional Master's Degree in Mathematics and Statistics at the University of Copenhagen



tech 42 | Course Management

Management



Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometeus Global Solutions
- CTO en Corporate Technologies in Corporate Technologies
- CTO in Al Shephers GmbH
- Doctorate in Psychology from the University of CastillaLa
- PhD in Economics, Business and Finance from the Camilo José Cela University. Outstanding Award in her PhD
- PhD in Psychology, University of CastillaLa Mancha
- Master's Degree in Advanced Information Technologies from the University of Castilla la Mancha
- Master MBA+E (Master's Degree in Business Administration and Organisational Engineering) from the University of Castilla la Mancha
- Associate lecturer, teaching undergraduate and master's degrees in Computer Engineering at the University of Castilla la Mancha
- Professor of the Master in Big Data and Data Science at the International University of Valencia
- Lecturer of the Master's Degree in Industry 4.0 and the Master's Degree in Industrial Design and Product Development
- Member of the SMILe Research Group of the University of Castilla la Mancha

Professors

Ms. Pedrajas Parabás, Elena

- Business Analyst in Management Solutions
- Collaborator with the Department of Numerical Analysis at the University of Cordoba Professional Experience
- Researcher in the Department of Computer Science and Numerical Analysis at the University of Cordoba
- Researcher at the Singular Center for Research in Intelligent Technologies in Santiago de Compostela
- Degree in Computer Engineering Master's Degree in Data Science and Computer Engineering Teaching Experience

Ms. García La O, Marta

- Specialist in Digital Marketing and RRSS
- Management, administration and account management at Think Planning and Development
- Organisation, supervision and mentoring of senior management training courses in Think Planning and Development
- Accountant-administrative in Tabacos Santiago y Zaraiche-Stan Roller
- Marketing Specialist at Versas Consultores
- Diploma in Business Studies from the University of Murcia
- Master's Degree in Sales and Marketing Management from Fundesem Business School

Mr. García Niño, Pedro

- Specialist in Web Positioning and SEO/Google Ads
- SEO On-Page / Off-Page Specialist
- Google Ads Specialist (SEM / PPC), Official Certification
- Specialist in Google Analytics/Digital Marketing Analytics and Performance Measurement
- Specialist in Digital Marketing and RRSS
- IT Services Sales Manager
- Computer Equipment Technician Hardware/Software Specialist

Mr. Catalán Ramírez, Raúl Luis

- Interface Designer and Analyst/Programmer at Prometeus Global Solutions
- Freelance designer and programmer
- Designer at Mille Cunti Association
- Graduated in Graphic Design at the EA. Pedro Almodóvar Teaching Experience
- CMS web implementation and management Professional Experience





If you want to make a positive change in your profession, the Postgraduate Diploma in Exploratory Analysis and Business Data Processing will help you achieve it.

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

The Postgraduate Diploma in Exploratory Analysis and Business Data Processing at TECH is an intensive program that prepares students to face challenges and business decisions in a competitive environment full of strategies, metadata and the latest advances in technology with which to boost the management of a company through data analysis.

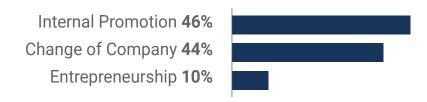
Its objective is to promote the student's personal and professional growth in order to achieve the success they are looking for in this field.

Do not miss the opportunity to specialize with us and you will notice how you will get the improvement you were looking for.

When the change occurs



Type of change



Salary increase

This program represents a salary increase of more than **25%** for our students.

\$59,800

A salary increase of

25.26%

\$74,905





tech 50 | Benefits for Your Company

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



Intellectual Capital and Talent Growth

The professional will introduce the company to new concepts, strategies, and perspectives that can bring about significant changes in the organization.



Retaining high-potential executives to avoid talent drain

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



Building agents of change

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



Increased international expansion possibilities

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





Project Development

The professional can work on a real project or develop new projects in the field of BI or Business Development of your company.



Increased competitiveness

It will equip professionals with the skills to take on new challenges and drive the organization forward.







tech 54 | Certificate

This **Postgraduate Diploma in Exploratory Data Analysis** 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 Diploma** issued by **TECH Technological University** via tracked delivery*.

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

Title: Postgraduate Diploma in Exploratory Analysis and Business Data Processing Official N° of Hours: 450 h.



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



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