



Postgraduate Certificate

Financial Data Analysis and Visualization with Plotly and Google Data Studio

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Schedule: at your own pace

» Exams: online

» Target Group: University graduates who have previously completed any degree in the fields of Economy and Legal Sciences, Administrative and Business Sciences

Website: www.techtitute.com/us/school-of-business/postgraduate-certificate/financial-data-analysis-visualization-plotly-google-data-studio

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Certificate

01 **Welcome**

Financial Data Analysis has undergone a significant transformation with the use of advanced Visualization tools. In an environment where fast and accurate decision making is crucial, tools such as Plotly and Google Data Studio offer efficient solutions to convert large volumes of financial data into interactive visual representations. As a result, professionals need to use them skillfully to optimize organizational strategies and track financial performance in real time. In order to facilitate this task, TECH is launching a pioneering university program focused on the handling of these digital instruments and the most sophisticated exploration techniques. In addition, it is taught in a convenient online mode that allows students to plan their schedules.









tech 08 | Why Study at TECH?

At TECH Technological University



Innovation

The university offers an online learning model that balances 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.

+100000

+200

executives prepared 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.





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 analyses in academia"

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.



Academic Excellence

TECH offers students the best online learning methodology. The university combines the Relearning method (postgraduate learning methodology with the best international valuation) with the Case Study. Tradition and vanguard in a difficult balance, and in the context of the most demanding educational 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 ground-breaking price**. This way, TECH ensures that studying is not as expensive for students as it would be at another university.





tech 12 | Why Our Program?

This program will provide you with a multitude of professional and personal advantages, among which we highlight the following:



A Strong Boost to Your Career

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 students achieve positive career development in less than 2 years.



Develop a strategic and global vision of the company

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

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.



You will 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 fields 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.



You will be part of an exclusive community

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

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





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

Postgraduate Certificate in Financial Data Analysis and Visualization with Plotly and Google Data Studio will enable students to:



Apply Artificial Intelligence techniques in financial decision making



Automate routine financial processes using machine learning



Develop predictive models for financial risk management





Optimize the allocation of financial resources using Al algorithms



Implement natural language processing tools for financial data analysis



Design recommender systems for the financial sector



Evaluate the impact of Artificial Intelligence on companies' profitability



09

Improve financial fraud detection with the use of Artificial Intelligence



Analyze large volumes of financial data using Big Data techniques



Create financial asset valuation models using Artificial Intelligence



Develop financial simulation tools based on Artificial Intelligence algorithms



Use neural networks to improve prediction of market trends



Apply data mining techniques to identify financial patterns



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Develop optimization models for financial planning



Develop Artificial Intelligence-based solutions for financial product personalization



Implement Artificial Intelligence systems for automated investment decision making



Investigate the use of Artificial Intelligence in financial regulation and compliance





Develop Artificial Intelligence solutions to reduce costs in financial processes

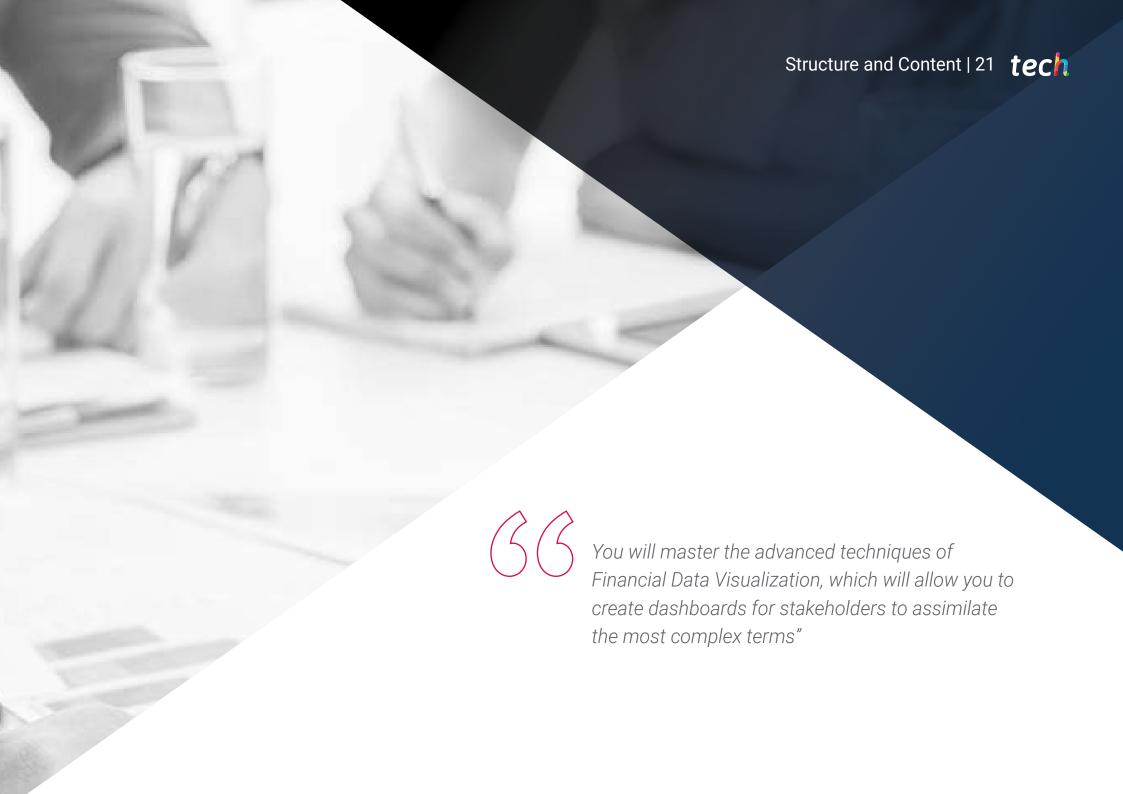


Develop analytical capabilities to interpret the results of financial AI models



Accurately analyze financial time series and detect both historical trends and recurring patterns





tech 22 | Structure and Content

Syllabus

The Postgraduate Certificate in Financial Data Analysis and Visualization with Plotly and Google Data Studio from TECH is an intensive program that will prepare you to successfully face economic decisions in the financial sector.

This program has been designed by recognized experts in the use of Artificial Intelligence in the Financial Department. Therefore, the teaching materials will cover issues ranging from the analysis or prediction of economic data to the use of specialized software such as Plotly, NewtworkX or Google Data Studio.

Students will develop skills to manage large volumes of financial information and communicate their findings through interactive graphics. In this way, they will optimize strategic decision making through the most sophisticated Machine Learning techniques.

This Postgraduate Certificate is developed over 6 weeks and is structured into 1 module:

Module 1

Financial Data Analysis and Visualization with Plotly and Google Data Studio



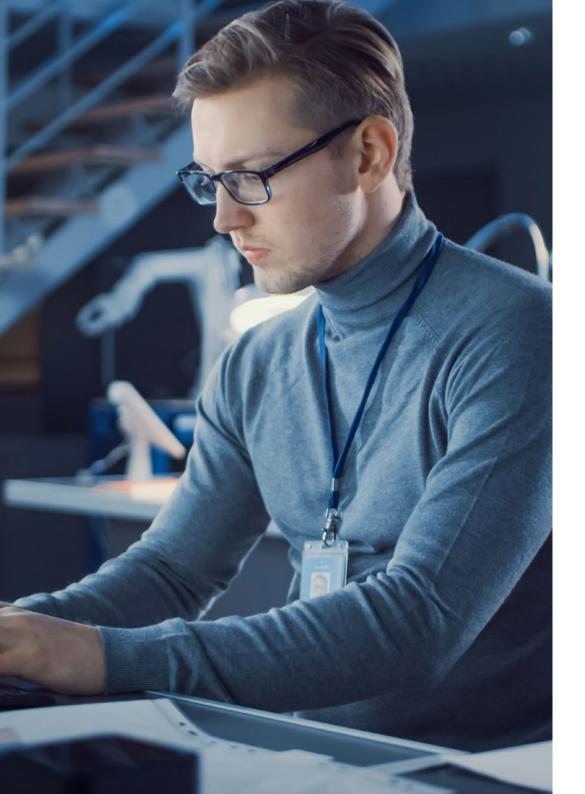
Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Certificate in Financial Data Analysis and Visualization with Plotly and Google Data Studio completely online. During the 6 weeks of the specialization, the student will be able to access all the contents of this program at any time, which will allow them to selfmanage their study time.

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

tech 24 | Structure and Content

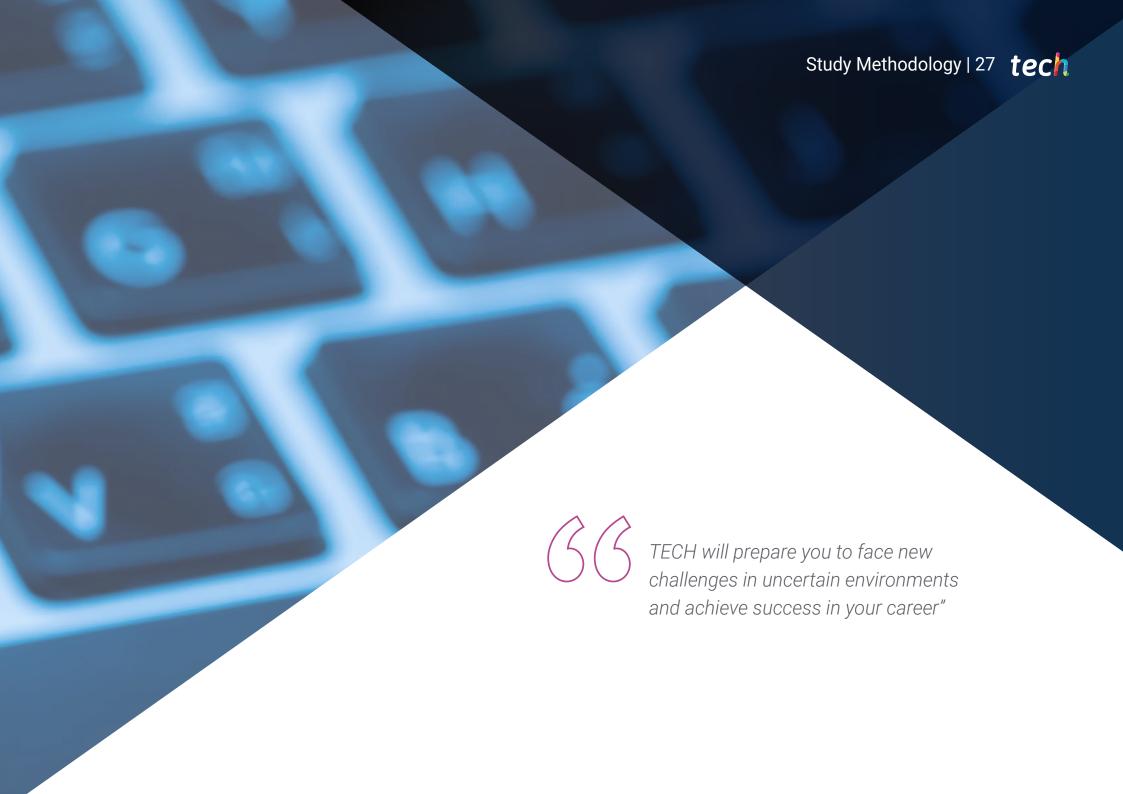
Module 1. Financial Data Analysis and Visualization with Plotly and Google Data Studio							
1.1. 1.1.1. 1.1.2. 1.1.3.	Analysis Introduction to Data Analysis Tools and Techniques for Financial Data Analysis	1.2.1. 1.2.2. 1.2.3.	Techniques for Exploratory Analysis of Financial Data Descriptive Analysis of Financial Data Visualization of Financial Data with Python and R Identifying Patterns and Trends in Financial Data	1.3. 1.3.1. 1.3.2. 1.3.3.	Financial Time Series Analysis Fundamentals of Time Series Time Series Models for Financial Data Time Series Analysis and Forecasting	1.4.2.	Correlation and Causality Analysis in Finance Correlation Analysis Methods Techniques for Identifying Causal Relationships Applications in Financial Analysis
1.5. 1.5.1. 1.5.2. 1.5.3.	Advanced Visualization of Financial Data Advanced Data Visualization Techniques Tools for Interactive Visualization (Plotly, Dash) Use Cases and Practical Examples	1.6. 1.6.1. 1.6.2. 1.6.3.	Cluster Analysis in Financial Data Introduction to Cluster Analysis Applications in Market and Customer Segmentation Tools and Techniques for Cluster Analysis	1.7. 1.7.1. 1.7.2. 1.7.3.	Networks and Graph Analysis in Finance Fundamentals of Network Analysis Applications of Graph Analysis in Finance Tools for Network Analysis (NetworkX, Gephi)	1.8.1.	Text and Sentiment Analysis in Finance Natural Language Processing (NLP) in Finance Sentiment Analysis in News and Social Media Tools and Techniques for Text Analysis
1.9. 1.9.1. 1.9.2. 1.9.3.	NumPy) Visualization Tools in R (ggplot2, Shiny)	1.10.1 1.10.2	Projects and Practical Applications of Analysis and Visualization Development of Financial Data Analysis Projects Implementation of Interactive Visualization Solutions Evaluation and Presentation of Project Results				





You will meet your objectives with the support of TECH's multimedia resources, such as interactive summaries, specialized readings and explanatory videos. Enroll now!"



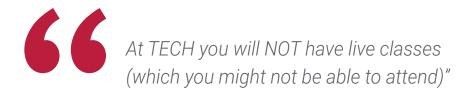


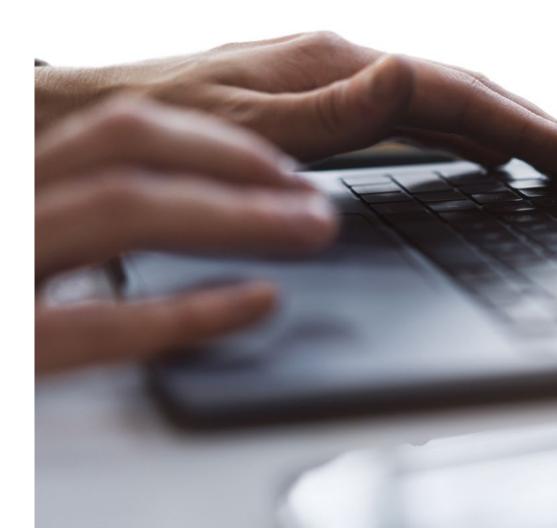
The student: the priority of all TECH programs

In TECH's study methodology, the student is the main protagonist.

The teaching tools of each program have been selected taking into account the demands of time, availability and academic rigor that, today, not only students demand but also the most competitive positions in the market.

With TECH's asynchronous educational model, it is students who choose the time they dedicate to study, how they decide to establish their routines, and all this from the comfort of the electronic device of their choice. The student will not have to participate in live classes, which in many cases they will not be able to attend. The learning activities will be done when it is convenient for them. They can always decide when and from where they want to study.









The most comprehensive study plans at the international level

TECH is distinguished by offering the most complete academic itineraries on the university scene. This comprehensiveness is achieved through the creation of syllabi that not only cover the essential knowledge, but also the most recent innovations in each area.

By being constantly up to date, these programs allow students to keep up with market changes and acquire the skills most valued by employers. In this way, those who complete their studies at TECH receive a comprehensive education that provides them with a notable competitive advantage to further their careers.

And what's more, they will be able to do so from any device, pc, tablet or smartphone.



TECH's model is asynchronous, so it allows you to study with your pc, tablet or your smartphone wherever you want, whenever you want and for as long as you want"

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Case Studies and Case Method

The case method has been the learning system most used by the world's best business schools. Developed in 1912 so that law students would not only learn the law based on theoretical content, its function was also to present them with real complex situations. In this way, they could make informed decisions and value judgments about how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

With this teaching model, it is students themselves who build their professional competence through strategies such as Learning by Doing or Design Thinking, used by other renowned institutions such as Yale or Stanford.

This action-oriented method will be applied throughout the entire academic itinerary that the student undertakes with TECH. Students will be confronted with multiple real-life situations and will have to integrate knowledge, research, discuss and defend their ideas and decisions. All this with the premise of answering the question of how they would act when facing specific events of complexity in their daily work.



Relearning Methodology

At TECH, case studies are enhanced with the best 100% online teaching method: Relearning.

This method breaks with traditional teaching techniques to put the student at the center of the equation, providing the best content in different formats. In this way, it manages to review and reiterate the key concepts of each subject and learn to apply them in a real context.

In the same line, and according to multiple scientific researches, reiteration is the best way to learn. For this reason, TECH offers between 8 and 16 repetitions of each key concept within the same lesson, presented in a different way, with the objective of ensuring that the knowledge is completely consolidated during the study process.

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.



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A 100% online Virtual Campus with the best teaching resources

In order to apply its methodology effectively, TECH focuses on providing graduates with teaching materials in different formats: texts, interactive videos, illustrations and knowledge maps, among others. All of them are designed by qualified teachers who focus their work on combining real cases with the resolution of complex situations through simulation, the study of contexts applied to each professional career and learning based on repetition, through audios, presentations, animations, images, etc.

The latest scientific evidence in the field of Neuroscience points to the importance of taking into account the place and context where the content is accessed before starting a new learning process. Being able to adjust these variables in a personalized way helps people to remember and store knowledge in the hippocampus to retain it in the long term. This is a model called Neurocognitive context-dependent e-learning that is consciously applied in this university qualification.

In order to facilitate tutor-student contact as much as possible, you will have a wide range of communication possibilities, both in real time and delayed (internal messaging, telephone answering service, email contact with the technical secretary, chat and videoconferences).

Likewise, this very complete Virtual Campus will allow TECH students to organize their study schedules according to their personal availability or work obligations. In this way, they will have global control of the academic content and teaching tools, based on their fast-paced professional update.



The online study mode of this program will allow you to organize your time and learning pace, adapting it to your schedule"

The effectiveness of the method is justified by four fundamental achievements:

- 1. Students who follow this method not only achieve the assimilation of concepts, but also a development of their mental capacity, through exercises that assess real situations and the application of knowledge.
- **2.** Learning is solidly translated into practical skills that allow the student to better integrate into the real world.
- 3. Ideas and concepts are understood more efficiently, given that the example situations are based on real-life.
- 4. Students like to feel that the effort they put into their studies is worthwhile. This then translates into a greater interest in learning and more time dedicated to working on the course.

The university methodology top-rated by its students

The results of this innovative teaching model can be seen in the overall satisfaction levels of TECH graduates.

The students' assessment of the quality of teaching, quality of materials, course structure and objectives is excellent. Not surprisingly, the institution became the best rated university by its students on the Trustpilot review platform, obtaining a 4.9 out of 5.

Access the study contents from any device with an Internet connection (computer, tablet, smartphone) thanks to the fact that TECH is at the forefront of technology and teaching.

You will be able to learn with the advantages that come with having access to simulated learning environments and the learning by observation approach, that is, Learning from an expert.



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As such, the best educational materials, thoroughly prepared, will be available in this program:



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.

This content is then adapted in an audiovisual format that will create our way of working online, with the latest techniques that allow us to offer you high quality in all of the material that we provide you with.



Practicing Skills and Abilities

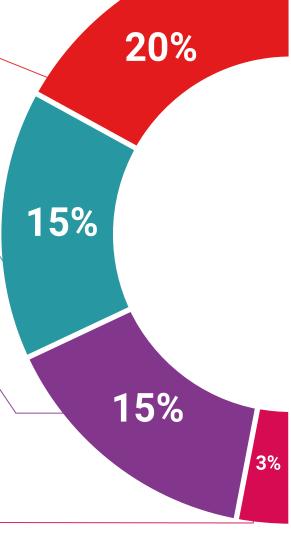
You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



Interactive Summaries

We present 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".





Additional Reading

Recent articles, consensus documents, international guides... In our virtual library you will have access to everything you need to complete your education.

Case Studies

Students will complete a selection of the best case studies in the field. Cases that are presented, analyzed, and supervised by the best specialists in the world.

Testing & Retesting



We periodically assess and re-assess your knowledge throughout the program. We do this on 3 of the 4 levels of Miller's Pyramid.

Classes



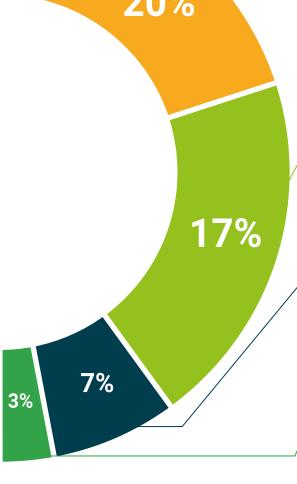
There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an expert strengthens knowledge and memory, and generates confidence for future difficult decisions.

Quick Action Guides

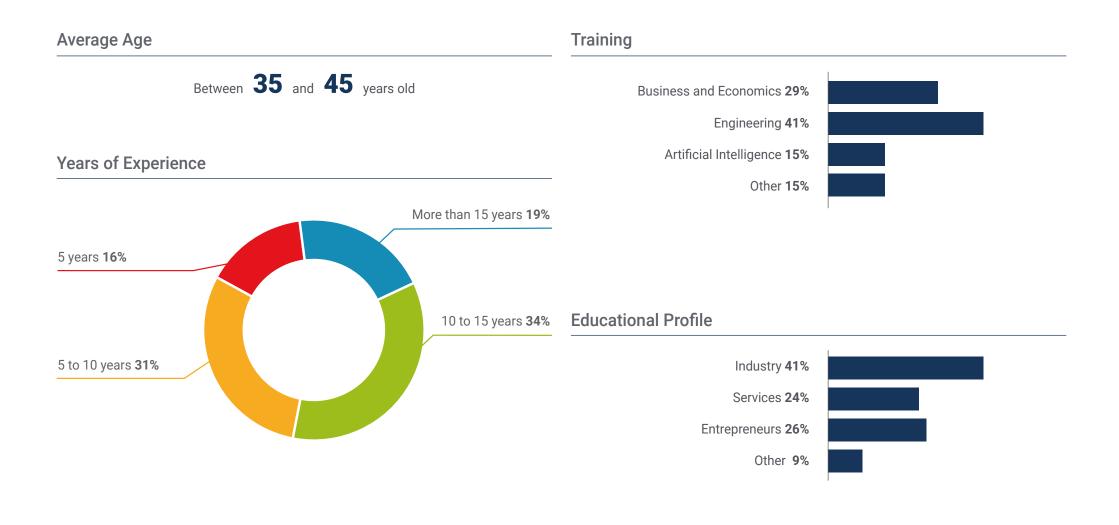


TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.

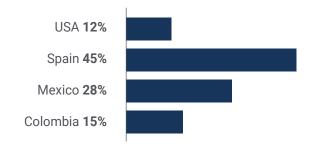








Geographical Distribution





Marcos Valdemoro Sáez

CFO of a reputable banking institution

"I would like to express my sincere thanks to TECH for the Postgraduate Certificate in Financial Data Analysis and Visualization. The academic experience has provided me with valuable skills that are enabling me to significantly optimize my company's operational processes"





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Management



Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometeus Global Solutions
- CTO at Korporate Technologies
- CTO at AI Shepherds GmbH
- Consultant and Strategic Business Advisor at Alliance Medical
- Director of Design and Development at DocPath
- PhD in Psychology from the University of Castilla La Mancha
- PhD in Economics, Business and Finance from the Camilo José Cela University
- PhD in Psychology from University of Castilla La Mancha
- Master's Degree in Executive MBA from the Isabel I University
- Master's Degree in Sales and Marketing Management, Isabel I University
- Expert Master's Degree in Big Data by Hadoop Training
- Master's Degree in Advanced Information Technologies from the University of Castilla La Mancha
- Member of the research group SMILE



Professors

Dr. Carrasco Aguilar, Álvaro

- Sales & Marketing Coordinator at LionLingo
- Researcher in Information Technology Management
- PhD in Social and Health Research: Technical and Economic Evaluation of Technologies, Interventions and Policies Applied to Health Improvement from the University of Castilla La Mancha
- Master's Degree in Social and Health Research from the University of Castilla La Mancha
- Degree in Political Science and Administration at the University of Granada
- Award for "Best Scientific Article for Technological Innovation for the Efficiency of Health Expenditure"
- Regular speaker at international scientific congresses





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

TECH's Postgraduate Certificate in Financial Data Analysis and Visualization with Plotly and Google Data Studio is an intensive program that prepares you to face challenges and business decisions in the field of Financial Management. The main objective is to promote your personal and professional growth. Helping you achieve success.

If you want to improve yourself, make a positive change at a professional level and interact with the best, this is the place for you.

Do not miss the opportunity to train with TECH and you will notice how you will get the job improvement you were looking for.

You will base strategic decisions on analytical data and visual representations, improving their effectiveness considerably.

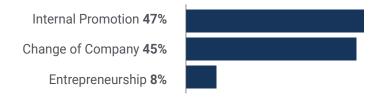
Time of change

During the program 11%

During the first year 63%

After 2 years 26%

Type of change



Salary increase

This program represents a salary increase of more than 26.24% for our students

\$52,000

A salary increase of

26.24%

\$65,644





tech 50 | Benefits for Your Company

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



Growth of talent and intellectual capital

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 R & D or business development of your company.



Increased competitiveness

This program will equip students with the skills to take on new challenges and drive the organization forward.





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This Postgraduate Certificate in Financial Data Analysis and Visualization with Plotly and Google Data Studio contains the most complete and up-to-date scientific 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: Postgraduate Certificate in Financial Data Analysis and Visualization with Plotly and Google Data Studio

Modality: online

Duration: 6 weeks



POSTGRADUATE CERTIFICATE

in

Financial Data Analysis and Visualization with Plotly and Google Data Studio

This is a qualification awarded by this University, equivalent to 150 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro

Unique TECH Code: AFWORD23S techtitute.com/ce

^{*}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.



Postgraduate Certificate Financial Data Analysis and Visualization with Plotly and Google Data Studio

- » Modality: online
- » Duration: 6 weeks
- » Certificate: TECH Technological University
- » Schedule: at your own pace
- » Exams: online

