



Fundamental Analysis of Financial Markets with Artificial Intelligence

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Global University

» Accreditation: 6 ECTS

» 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

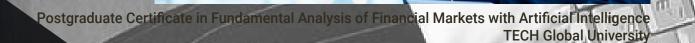
Website: www.techtitute.com/us/school-of-business/postgraduate-certificate/fundamental-analysis-financial-markets-artificial-intelligence

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# 01 **Welcome**

In an increasingly complex and dynamic financial environment, Fundamental Analysis has established itself as an essential tool for investment evaluation. Traditionally, this approach has been based on the review of financial statements or the analysis of economic and market factors. However, the incorporation of Artificial Intelligence has revolutionized the way this evaluation is carried out. Therefore, professionals need to develop technical skills to implement Machine Learning models to improve the accuracy of economic information. In this context, TECH presents a revolutionary program focused on the integration of this technology in institutions. It is also taught in a convenient 100% online mode.









## 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.





## tech 16 | Objectives

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

The Postgraduate Certificate in Fundamental Analysis of Financial Markets with Artificial Intelligence will enable students to:



Acquire skills in processing and analyzing large volumes of financial data using Big Data technologies, such as Hadoop and Spark



Foster the ability to create and apply Artificial Intelligence models that are explainable and transparent, ensuring that Artificial Intelligence-based financial decisions are understandable and justifiable







Develop a thorough understanding of the ethical and regulatory challenges associated with the use of Artificial Intelligence in finance



Apply Artificial Intelligence technologies in finance in an ethical and responsible manner, incorporating fairness, transparency and privacy considerations into their solutions





### tech 20 | Structure and Content

### **Syllabus**

This Postgraduate Certificate in Fundamental Analysis of Financial Markets with Artificial Intelligence TECH Global University is an immersive program that prepares students to address complex challenges in the economic field.

The academic itinerary will delve into subjects ranging from predictive modeling of financial performance with TensorFlow or company valuation using Deep Learning techniques to the optimization of investment portfolios. At the same time, the syllabus will delve into the most effective strategies to detect fraudulent movements or transactions through Deep Learning.

In this way, experts will handle the most modern Machine Learning models to carry out the valuation of institutions, analysis of financial statements and evaluation of macroeconomic factors. This will enable students to significantly optimize their operational processes through the application of robotic Neural Networks.

In addition, this is a program of study that does not require attendance at centers and does not have preset class schedules. Therefore, graduates will have greater freedom to self-manage their access time and reconcile their daily activities with a top quality education.

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

Module 1

Fundamental Analysis of Financial Markets with Artificial Intelligence



### Where, When and How is it Taught?

TECH offers the possibility to develop this Postgraduate Certificate in Fundamental Analysis of Financial Markets with Artificial Intelligence 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 self-manage their study time.

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

### tech 22 | Structure and Content

1.9.2. Constructing Neural Network Detection

1.9.3. Practical Implementation of Fraud Detection

Systems in Financial Transactions

Models in TensorFlow

#### Module 1. Fundamental Analysis of Financial Markets with Artificial Intelligence 1.1. Predictive Financial Performance 1.4. Risk and Credit Analysis with 1.2. Valuation of Companies with Deep 1.3. Analysis of Financial Statements Modeling with Scikit-learn with NLP Using ChatGPT Machine Learning Learning 1.1.1. Linear and Logistic Regression for Financial 1.2.1. Automating the Discounted Cash Flows 1.4.1. Credit Scoring Models Using SVM and 1.3.1. Extracting Key Information from Annual Forecasting with Scikit-learn (DCF) Model with TensorFlow Reports with ChatGPT Decision Trees in Scikit-learn 1.1.2. Using Neural Networks with TensorFlow to 1.2.2. Advanced Valuation Models Using PyTorch 1.3.2. Sentiment Analysis of Analyst Reports and 1.4.2. Credit Risk Analysis in Corporations and Forecast Revenues and Earnings 1.2.3. Integration and Analysis of Multiple Valuation Financial News with ChatGPT Bonds with TensorFlow 1.3.3. Implementing NLP Models with Chat GPT for 1.1.3. Validating Predictive Models with Cross-Models with Pandas 1.4.3. Visualization of Risk Data with Tableau Validation Using Scikit-learn Interpreting Financial Texts Credit Analysis with Scikit-learn 1.6. ESG Sustainability Assessment with Sector Benchmarking with Artificial 1.8. Portfolio Management with 1.7. **Data Mining Techniques** Intelligence Using TensorFlow and **Artificial Intelligence Optimization** 1.5.1. Implementing Credit Scoring Models 1.5.2. Credit Risk Analysis with RandomForest in Power BI 1.6.1. ESG Data Mining Methods 1.8.1. Portfolio Optimization Scikit-learn 1.6.2. ESG Impact Modeling with 1.8.2. Use of Machine Learning Techniques for 1.7.1. Comparative Analysis of Companies Using 1.5.3. Advanced Visualization of Credit Scoring Regression Techniques Portfolio Optimization with Scikit-Optimize Artificial Intelligence Results with Tableau 1.6.3. Applications of ESG Analysis 1.8.3. Implementing and Evaluating the 1.7.2. Predictive Modeling of Sector Performance Effectiveness of Algorithms in Portfolio in Investment Decisions with TensorFlow Management 1.7.3. Implementing Industry Dashboards with Power BI 1.9. Financial Fraud Detection with Al 1.10. Analysis and Modeling in Mergers Using TensorFlow and Keras and Acquisitions with Artificial Intelligence 1.9.1. Basic Concepts and Techniques of Fraud Detection with Artificial Intelligence 1.10.1. Using Predictive AI Models to Evaluate

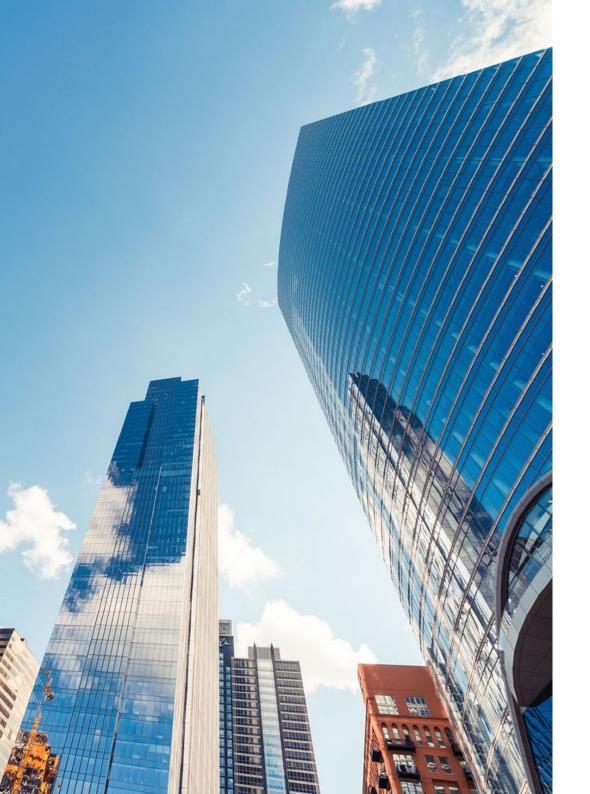
Mergers and Acquisitions

Intelligent Models

1.10.2. Simulating Post-Merger Scenarios Using

1.10.3. Evaluating the Financial Impact of M&A with

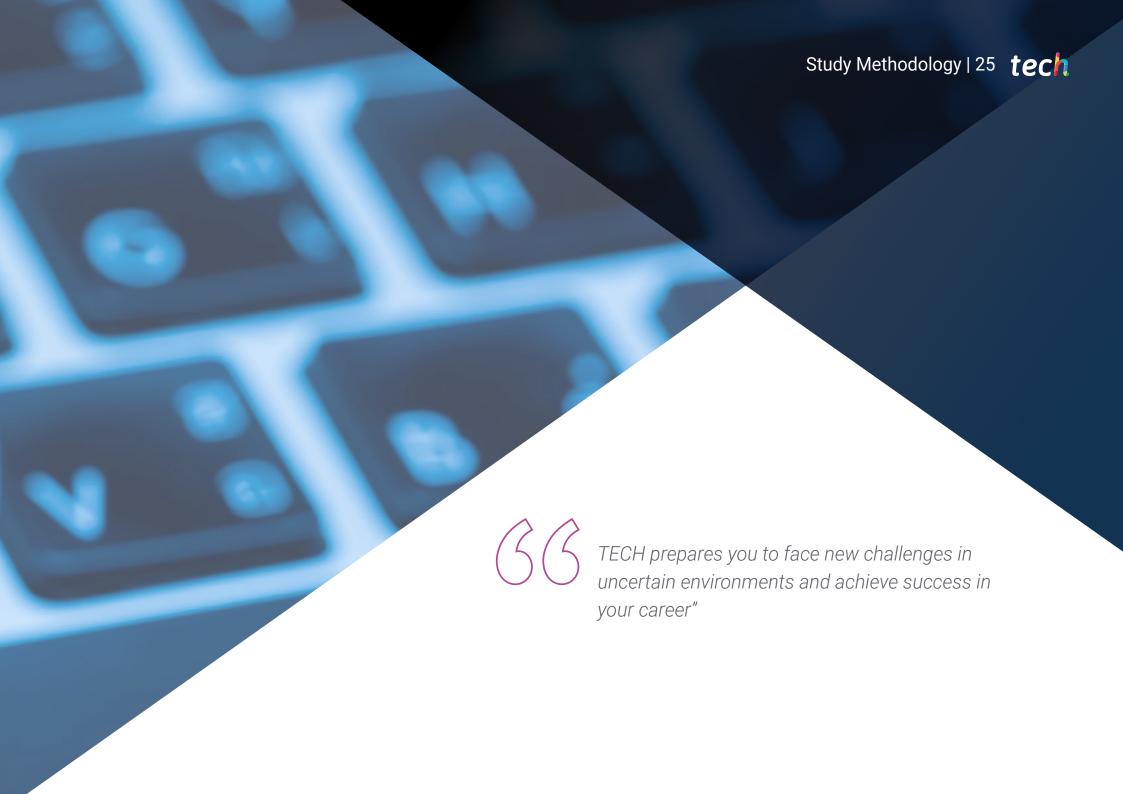
Machine Learning Techniques





The interactive summaries of each topic will allow you to consolidate in a more dynamic way the concepts related to the implementation of Natural Language Processing with ChatGPT"



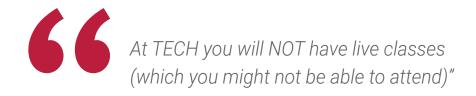


### The student: the priority of all TECH programs

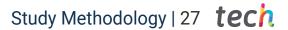
In TECH's study methodology, the student is the main protagonist.

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"

### tech 28 | Study Methodology

### 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.



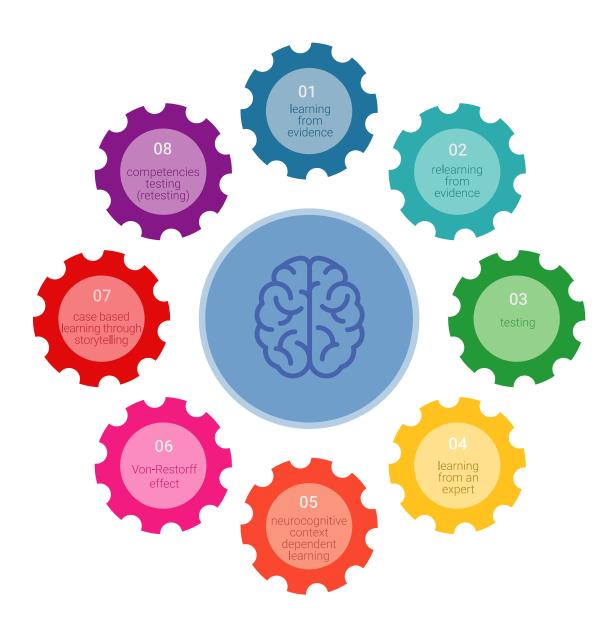
### Relearning Methodology

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.



### tech 30 | Study Methodology

### 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.



### tech 32 | Study Methodology

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**

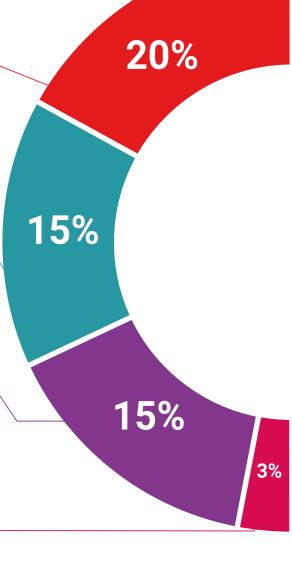
You will carry out activities to develop specific competencies and skills in each thematic field. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop within the framework of the globalization we live in.



#### **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



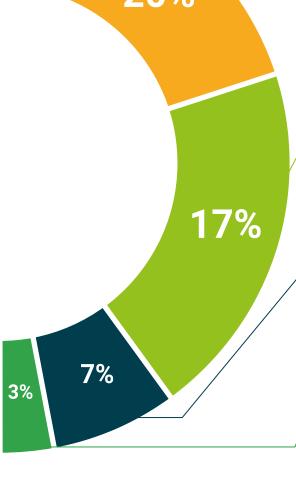
There is scientific evidence suggesting that observing third-party experts can be useful.

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

### **Quick Action Guides**



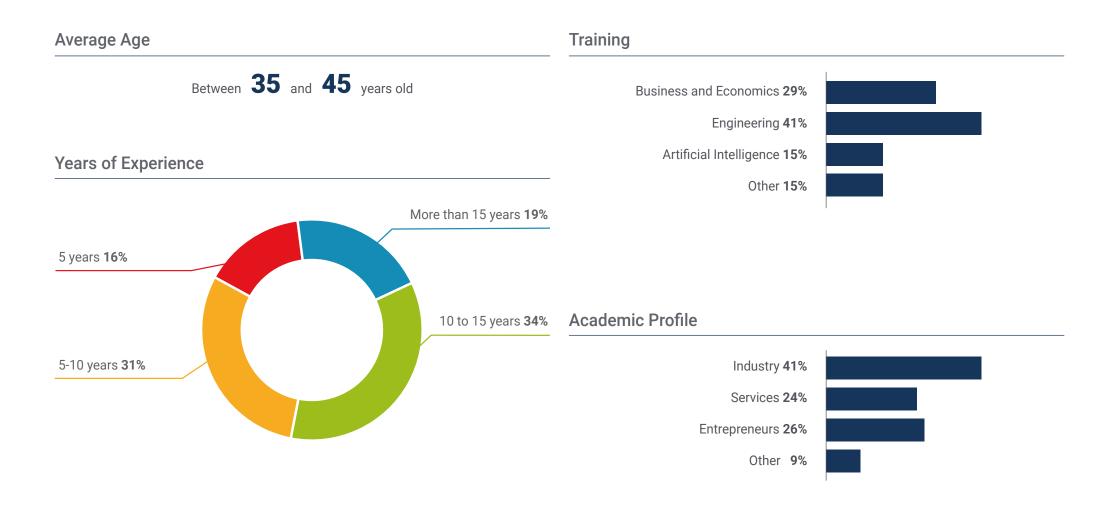
TECH offers the most relevant contents of the course in the form of worksheets or quick action guides. A synthetic, practical and effective way to help students progress in their learning.



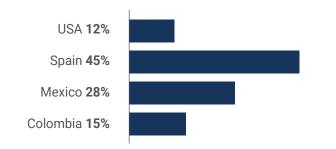




### tech 36 | Our Students' Profiles



#### **Geographical Distribution**



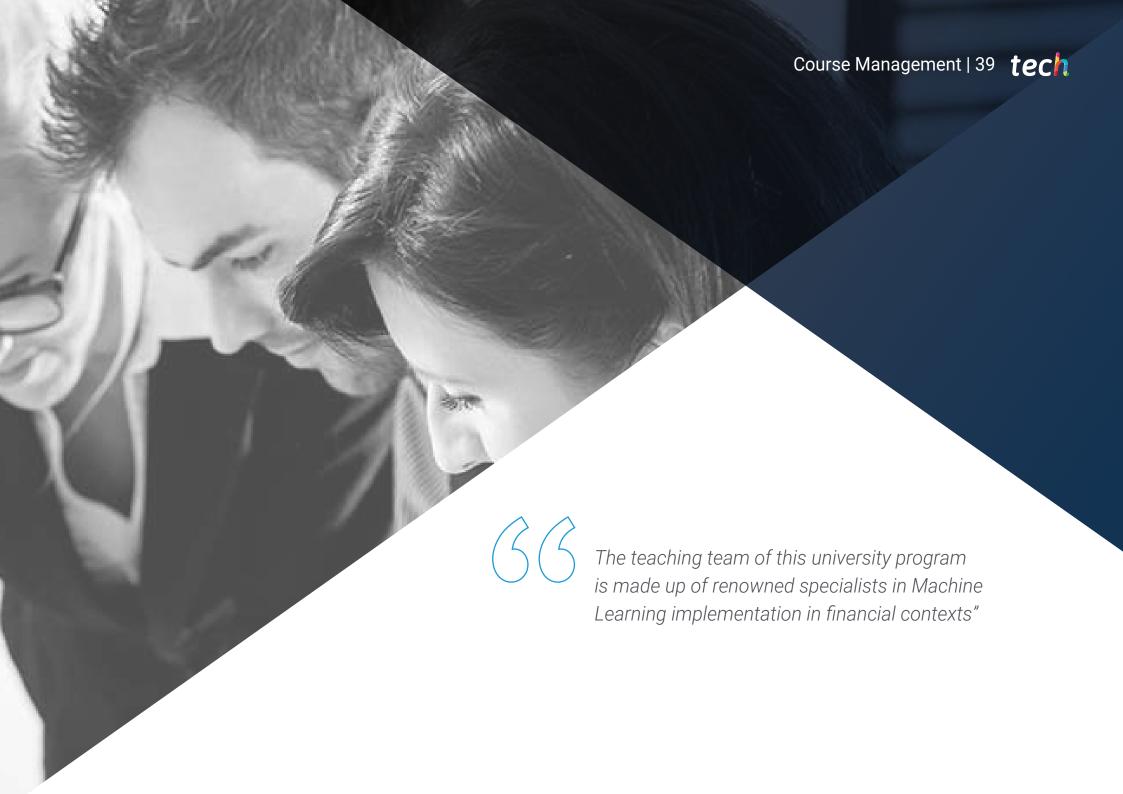


# **David Castillo Bonilla**

#### Financial Analyst in a prestigious bank

"TECH's Postgraduate Certificate in Fundamental Analysis of Financial Markets with Artificial Intelligence is the perfect opportunity to keep abreast of the latest technology trends. The curriculum gave me solid analytical skills that have allowed me to automate repetitive tasks such as analyzing large volumes of data, thus optimizing my operational processes"





### 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



# Course Management | 41 tech

#### **Professors**

#### Mr. Sánchez Mansilla, Rodrigo

- Digital Advisor at Al Shepherds GmbH
- Digital Account Manager at Kill Draper
- Head of Digital at Kuarere
- Digital Marketing Manager at Arconi Solutions, Deltoid Energy and Brinergy Tech
- Founder and National Sales and Marketing Manager
- Master's Degree in Digital Marketing (MDM) by The Power Business School
- Bachelor's Degree in Business Administration (BBA) from the University of Buenos Aires



Take the opportunity to learn about the latest advances in this field in order to apply it to your daily practice"





# tech 44 | Impact on Your Career

You will lead the digital transformation of companies and implement Artificial Intelligence solutions to analyze Financial Markets with maximum accuracy.

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

TECH's Postgraduate Certificate in Fundamental Analysis of Financial Markets with Artificial Intelligence is an intensive program that prepares you to face challenges and business decisions in the field of Economic Management. Its 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 network with the best, then this is the place for you.

You will reinforce your key knowledge through the innovative Relearning methodology for an effective assimilation of the subject.

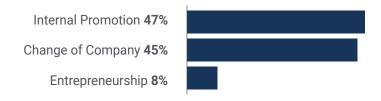
## Time of Change

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 **26.24%** 

\$65,644





# tech 48 | 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.







# tech 52 | Certificate

This private qualification will allow you to obtain a **Postgraduate Certificate in Fundamental Analysis of Financial Markets with Artificial Intelligence** 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** private qualification 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: Postgraduate Certificate in Fundamental Analysis of Financial Markets with Artificial Intelligence

Modality: online

Duration: 6 weeks

Accreditation: 6 ECTS



has successfully passed and obtained the title of:

# Postgraduate Certificate in Fundamental Analysis of Financial Markets with Artificial Intelligence

This is a private qualification of 180 hours of duration equivalent to 6 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024





# Postgraduate Certificate Fundamental Analysis of Financial Markets with Artificial Intelligence

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» Exams: online

