Postgraduate Diploma

Data Processing and Trading with Artificial Intelligence

tech global university

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Postgraduate Diploma
Data Processing and Trading
with Artificial Intelligence

» Modality: **online**
» Duration: **6 months**
» Certificate: **TECH Global University**
» Accreditation: **18 ECTS**
» Schedule: **at your own pace**
» Exams: **online**
» Target Group: **University graduates who have previously completed any degree in the fields of Social and Legal Sciences, Administrative and Business Sciences, or Design and Artificial Intelligence**

Website: **www.techtitute.com/us/school-of-business/postgraduate-diploma/postgraduate-diploma-data-processing-trading-artificial-intelligence**

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01
Welcome

The use of Artificial Intelligence in data processing and trading is revolutionizing the financial markets. In fact, the implementation of automated trading algorithms, which analyze large volumes of data, makes it possible to identify market patterns and trends that are often invisible to humans. According to a Deloitte report, it is estimated that global banks can increase their productivity by 27%-35% by adopting generative AI, which could translate into a significant increase in revenue per employee.

In this context, TECH has launched a fully online and flexible program, which will allow graduates to organize their study schedules, relying on the innovative Relearning methodology.

Postgraduate Diploma in Data Processing and Trading with Artificial Intelligence
TECH Global University

With this 100% online Postgraduate Diploma, you will acquire advanced skills in the management of Big Data, being able to process and analyze large volumes of information in real time"

02
Why Study at TECH?

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

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

At TECH 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
executives prepared each year

+200
different nationalities

Empowerment

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

+500 | collaborative agreements with leading companies

Talent

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

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

Multicultural Context

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

TECH students represent more than 200 different nationalities.

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

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"

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.

03
Why Our Program?

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

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

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

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

01

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.

02

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.

03

Consolidate the student's senior management skills

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

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

04

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.

05 Access to a powerful network of contacts

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

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

06 Thoroughly develop business projects.

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

20% of our students develop their own business idea.

07 Improve *soft skills* and management skills

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

Improve your communication and leadership skills and enhance your career.

08 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.

04
Objectives

The main objective of the university program will be to prepare professionals to acquire a solid command of Big Data and Artificial Intelligence technologies, applied to the analysis and trading of financial data. In this way, they will develop skills in the management of large volumes of information in real time, allowing them to optimize investment decisions and improve operational efficiency. In addition, ethical and regulatory aspects will be studied in depth, ensuring that graduates are experts in the use of technological tools and understand the importance of acting responsibly, complying with current regulations.

The objectives will prepare you to lead in a constantly evolving industry, driving innovation and promoting sustainable practices in the field of Artificial Intelligence applied to finance"

**TECH makes the goals of their students their own goals too
Working together to achieve them**
The **Postgraduate Diploma in Data Processing and Trading with Artificial Intelligence** will enable the student to:

01 Develop skills to manage and analyze large volumes of financial data with Big Data technologies

04 Apply data mining techniques to identify market patterns and investor behavior

02 Implement real-time processing tools to improve efficiency in the analysis and detection of financial fraud

03 Integrate and cleanse massive financial data ensuring quality and accuracy for advanced analytics

05 Utilize tools such as Hadoop and Spark for efficient analysis of large-scale financial transactions

06 Ensure the security and privacy of financial data by complying with regulations such as GDPR and CCPA

07 Explore the impact of cloud computing on the scalability and efficiency of mass financial analytics

08 Acquire advanced algorithmic trading strategies with backtesting and optimization of learning models

Structure and Content

The program will cover fundamental topics such as Big Data management, real-time data processing and the application of AI algorithms to optimize trading strategies. Therefore, predictive analytics and Machine Learning methodologies will be examined, as well as data visualization to facilitate decision making. In addition, ethical and regulatory aspects related to the use of AI in the financial sphere will be addressed, ensuring that entrepreneurs understand the importance of complying with regulations and implementing responsible practices.

The content of the Postgraduate Diploma has been designed to provide you with in-depth and practical knowledge about Artificial Intelligence tools and techniques used in financial data analysis"

Syllabus

The use of Artificial Intelligence in data processing and trading has revolutionized the financial sector, improving the efficiency and accuracy of investment decisions. AI tools, such as machine learning, are being used to analyze large volumes of data in real time, allowing traders to identify market patterns and trends that would be difficult to detect manually.

This is how this Postgraduate Diploma was created, which will offer comprehensive training focused on mastering Big Data technologies, enabling entrepreneurs to manage and process large-scale, real-time financial data. This approach will focus on the efficiency and speed of data analysis, prioritizing security and privacy.

In this sense, professionals will acquire practical skills in the implementation of tools and techniques that facilitate the analysis of large volumes of data.

Likewise, the ethical and regulatory aspects of Artificial Intelligence in the financial field will be analyzed. In this way, experts will be able to promote responsible practices and comply with current regulations, ensuring that the use of AI is carried out in an ethical and transparent manner.

In this way, TECH has developed a university program in a 100% online format, allowing graduates to access the teaching materials from any electronic device with an Internet connection. This will eliminate the need to move to a physical location and to comply with fixed schedules. In addition, the revolutionary Relearning methodology will be used, focusing on the repetition of fundamental ideas to ensure a deep understanding of the content.

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

Module 1	Large Scale Financial Data Processing
Module 2	Algorithmic Trading Strategies
Module 3	Ethical and Regulatory Aspects of Artificial Intelligence in Finance

Where, When and How is it Taught?

TECH offers the possibility of developing this Postgraduate Diploma in Data Processing and Trading with Artificial Intelligence fully online. Throughout the 6 months of the educational program, the students will be able to access all the contents of this program at any time, allowing them to self-manage their study time.

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

Module 1. Large Scale Financial Data Processing

1.1. Big Data in the Financial Context
1.1.1. Key Characteristics of Big Data in Finance
1.1.2. Importance of the 5 Vs (Volume, Velocity, Variety, Veracity, Value) in Financial Data
1.1.3. Use Cases of Big Data in Risk Analysis and Compliance

1.2. Technologies for Storage and Management of Financial Big Data
1.2.1. NoSQL Database Systems for Financial Warehousing
1.2.2. Using Data Warehouses and Data Lakes in the Financial Sector
1.2.3. Comparison between On-Premises and Cloud-Based Solutions

1.3. Real-Time Processing Tools for Financial Data
1.3.1. Introduction to Tools such as Apache Kafka and Apache Storm
1.3.2. Real-Time Processing Applications for Fraud Detection
1.3.3. Benefits of Real-Time Processing in Algorithmic Trading

1.4. Integration and Data Cleaning in Finance
1.4.1. Methods and Tools for Integrating Data from Multiple Sources
1.4.2. Data Cleaning Techniques to Ensure Data Quality and Accuracy
1.4.3. Challenges in the Standardization of Financial Data

1.5. Data Mining Techniques Applied to The Financial Markets
1.5.1. Classification and Prediction Algorithms in Market Data
1.5.2. Sentiment Analysis in Social Networks for Predicting Market Movements
1.5.3. Data Mining to Identify Trading Patterns and Investor Behavior

1.6. Advanced Data Visualization for Financial Analysis
1.6.1. Visualization Tools and Software for Financial Data
1.6.2. Design of Interactive Dashboards for Market Monitoring
1.6.3. The Role of Visualization in Risk Analysis Communication

1.7. Use of Hadoop and Related Ecosystems in Finance
1.7.1. Key Components of the Hadoop Ecosystem and Their Application in Finance
1.7.2. Hadoop Use Cases for Large Transaction Volume Analysis
1.7.3. Advantages and Challenges of Integrating Hadoop into Existing Financial Infrastructures

1.8. Spark Applications in Financial Analytics
1.8.1. Spark for Real-Time and Batch Data Analytics
1.8.2. Predictive Model Building Using Spark MLlib
1.8.3. Integration of Spark with Other Big Data Tools in Finance

1.9. Data Security and Privacy in the Financial Sector
1.9.1. Data Protection Rules and Regulations (GDPR, CCPA)
1.9.2. Encryption and Access Management Strategies for Sensitive Data
1.9.3. Impact of Data Breaches on Financial Institutions

1.10. Impact of Cloud Computing on Large-Scale Financial Analysis
1.10.1. Advantages of the Cloud for Scalability and Efficiency in Financial Analysis
1.10.2. Comparison of Cloud Providers and Their Specific Financial Services
1.10.3. Case Studies on Migration to the Cloud in Large Financial Institutions

Module 2. Algorithmic Trading Strategies

2.1. **Fundamentals of Algorithmic Trading**
2.1.1. Algorithmic Trading Strategies
2.1.2. Key Technologies and Platforms for the Development of Algorithmic Trading Algorithms
2.1.3. Advantages and Challenges of Automated Trading versus Manual Trading

2.2. **Design of Automated Trading Systems**
2.2.1. Structure and Components of an Automated Trading System
2.2.2. Algorithm Programming: from the Idea to the Implementation
2.2.3. Latency and Hardware Considerations in Trading Systems

2.3. **Backtesting and Evaluation of Trading Strategies**
2.3.1. Methodologies for Effective Backtesting of Algorithmic Strategies
2.3.2. Importance of Quality Historical Data in Backtesting
2.3.3. Key Performance Indicators for Evaluating Trading Strategies

2.4. **Optimizing Strategies with Machine Learning**
2.4.1. Applying Supervised Learning Techniques in Strategy Improvement
2.4.2. Using Particle Swarm Optimization and Genetic Algorithms
2.4.3. Challenges of Overfitting in Trading Strategy Optimization

2.5. **High Frequency Trading (HFT)**
2.5.1. Principles and Technologies behind HFT
2.5.2. Impact of HFT on Market Liquidity and Volatility
2.5.3. Common HFT Strategies and Their Effectiveness

2.6. **Order Execution Algorithms**
2.6.1. Types of Execution Algorithms and Their Practical Application
2.6.2. Algorithms for Minimizing the Market Impact
2.6.3. Using Simulations to Improve Order Execution

2.7. **Arbitration Strategies in Financial Markets**
2.7.1. Statistical Arbitrage and Price Merger in Markets
2.7.2. Index and ETF Arbitrage
2.7.3. Technical and Legal Challenges of Arbitrage in Modern Trading

2.8. **Risk Management in Algorithmic Trading**
2.8.1. Risk Measures for Algorithmic Trading
2.8.2. Integrating Risk Limits and Stop-Loss in Algorithms
2.8.3. Specific Risks of Algorithmic Trading and How to Mitigate Them

2.9. **Regulatory Aspects and Compliance in Algorithmic Trading**
2.9.1. Global Regulations Impacting Algorithmic Trading
2.9.2. Regulatory Compliance and Reporting in an Automated Environment
2.9.3. Ethical Implications of Automated Trading

2.10. **Future of Algorithmic Trading and Emerging Trends**
2.10.1. Impact of Artificial Intelligence on the Future Development of Algorithmic Trading
2.10.2. New Blockchain Technologies and Their Application in Algorithmic Trading
2.10.3. Trends in Adaptability and Customization of Trading Algorithms

Module 3. Ethical and Regulatory Aspects of Artificial Intelligence in Finance

3.1. **Ethics in Artificial Intelligence Applied to Finance**
3.1.1. Fundamental Ethical Principles for the Development and Use of AI in Finance
3.1.2. Case Studies on Ethical Dilemmas in Financial AI Applications
3.1.3. Developing Ethical Codes of Conduct for Financial Technology Professionals

3.2. **Global Regulations Affecting the Use of AI in Financial Markets**
3.2.1. Overview of the Main International Financial Regulations on AI
3.2.2. Comparison of AI Regulatory Policies among Different Jurisdictions
3.2.3. Implications of AI Regulation on Financial Innovation

3.3. **Transparency and Explainability of AI Models in Finance**
3.3.1. Importance of Transparency in AI Algorithms for User Confidence
3.3.2. Techniques and Tools to Improve the Explainability of AI Models
3.3.3. Challenges of Implementing Interpretable Models in Complex Financial Environments

3.4. **Risk Management and Ethical Compliance in the Use of AI**
3.4.1. Risk Mitigation Strategies Associated with the Deployment of AI in Finance
3.4.2. Ethics Compliance in the Development and Application of AI Technologies
3.4.3. Ethical Oversight and Audits of AI Systems in Financial Operations

3.5. **Social and Economic Impact of AI in Financial Markets**
3.5.1. Effects of AI on the Stability and Efficiency of Financial Markets
3.5.2. AI and Its Impact on Employment and Professional Skills in Finance
3.5.3. Benefits and Social Risks of Large-Scale Financial Automation

3.6. **Data Privacy and Protection in AI Financial Applications**
3.6.1. Data Privacy Regulations Applicable to AI Technologies in Finance
3.6.2. Personal Data Protection Techniques in AI-Based Financial Systems
3.6.3. Challenges in Managing Sensitive Data in Predictive and Analytics Models

3.7. **Algorithmic Bias and Fairness in AI Financial Models**
3.7.1. Identification and Mitigation of Bias in Financial AI Algorithms
3.7.2. Strategies to Ensure Fairness in Automated Decision-Making Models
3.7.3. Impact of Algorithmic Bias on Financial Inclusion and Equity

3.8. **Challenges of Regulatory Oversight in Financial AI**
3.8.1. Difficulties in the Supervision and Control of Advanced AI Technologies
3.8.2. Role of Financial Authorities in the Ongoing Supervision of AI
3.8.3. Need for Regulatory Adaptation in the Face of Advancing AI Technology

3.9. **Strategies for Responsible Development of AI Technologies in Finance**
3.9.1. Best Practices for Sustainable and Responsible AI Development in the Financial Sector
3.9.2. Initiatives and Frameworks for Ethical Assessment of AI Projects in Finance
3.9.3. Collaboration between Regulators and Businesses to Encourage Responsible Practices

3.10. **Future of AI Regulation in the Financial Sector**
3.10.1. Emerging Trends and Future Challenges in AI Regulation in Finance
3.10.2. Preparation of Legal Frameworks for Disruptive Innovations in Financial Technology
3.10.3. International Dialogue and Cooperation for Effective and Unified Regulation of AI in Finance

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

06
Study Methodology

TECH is the first university in the world to combine case study methodology with Relearning, a 100% online learning system based on guided repetition.

This innovative pedagogical strategy has been conceived to offer professionals the opportunity to update knowledge and develop skills in an intensive and rigorous way. A learning model that places the student at the center of the academic process and gives them the leading role, adapting to their needs and leaving aside the more conventional methodologies.

" *TECH prepares you to face new challenges in uncertain environments and achieve success in your career"*

## 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.

" *At TECH you will NOT have live classes (which you might not be able to attend)"*
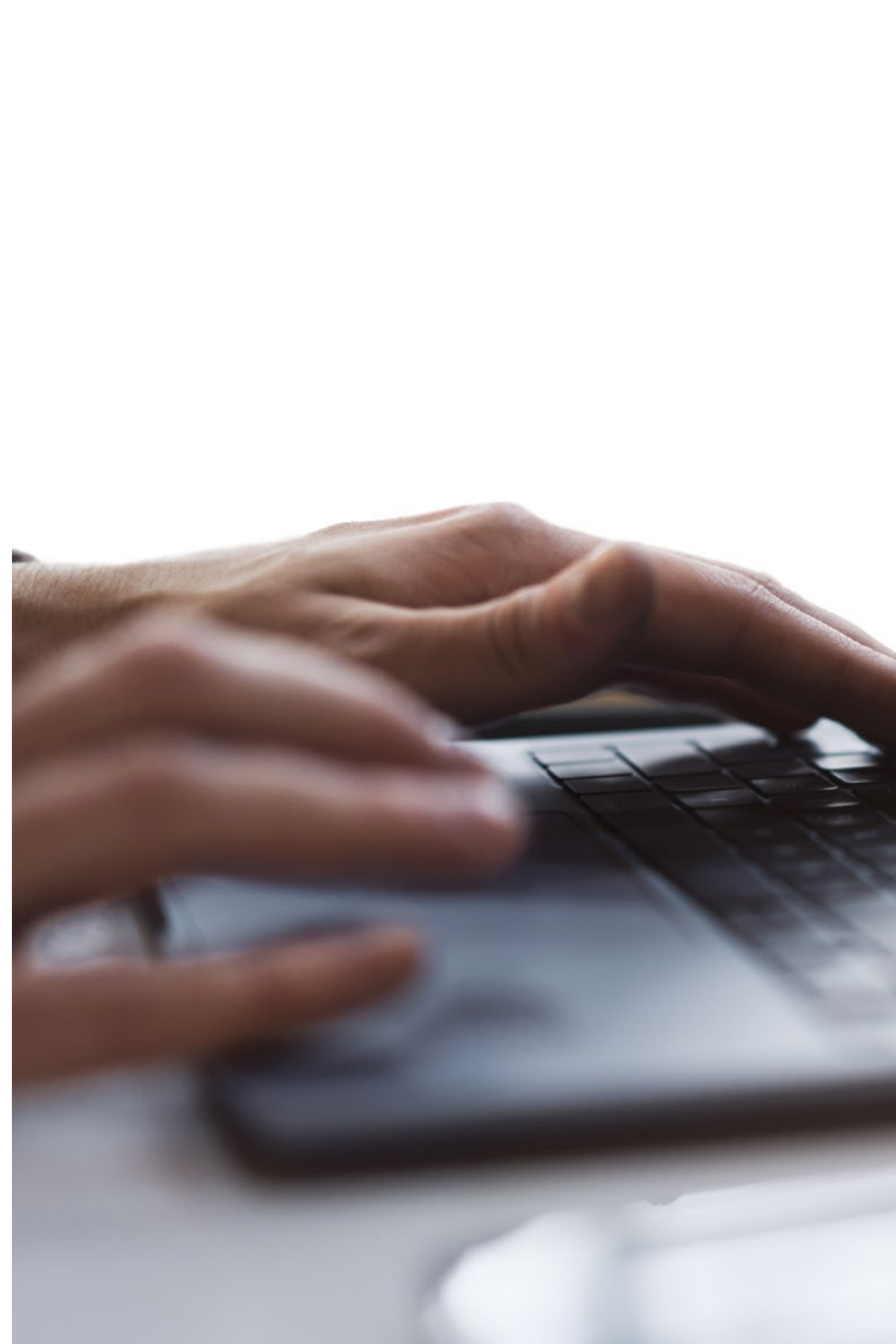
The most comprehensive study plans at the international level

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"

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.

01
learning from evidence

02
relearning from evidence

03
testing

04
learning from an expert

05
neurocognitive context dependent learning

06
Von-Restorff effect

07
case based learning through storytelling

08
competencies testing (retesting)

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.

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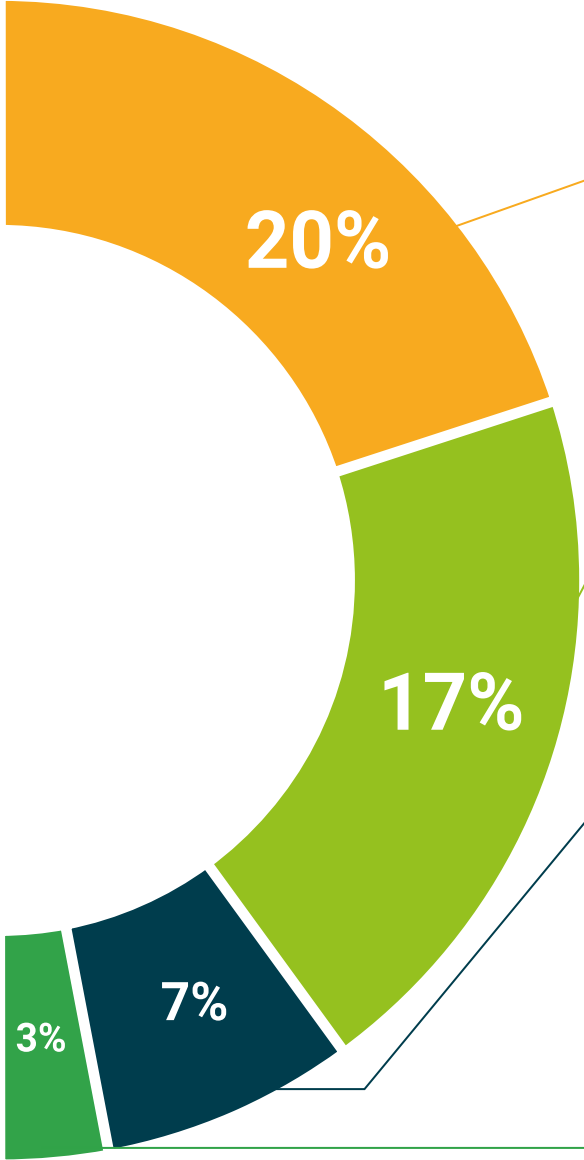
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".

Additional Reading

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

20%

15%

15%

3%

20%

17%

7%

3%

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.

Our Students' Profiles

The student profile is composed of motivated professionals with a solid background in areas such as Finance, Management or Artificial Intelligence, who seek to expand their knowledge and skills in the field of data analysis and trading. They also have a deep interest in new technologies and their application in the financial sector, as well as a willingness to delve into advanced Big Data tools and Artificial Intelligence algorithms. In addition, they have work experience in the financial sector or related fields and are eager to acquire skills that will enable them to improve their professional performance.
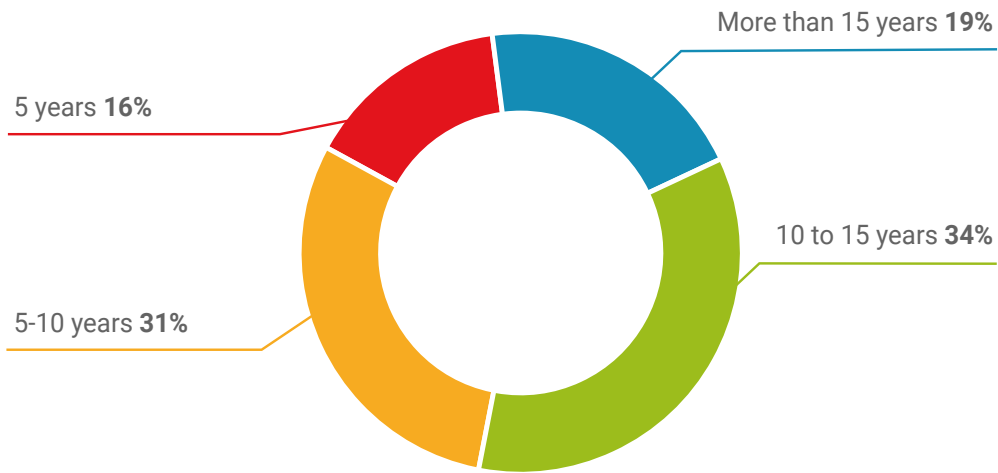
Students value ethics and responsibility in the use of artificial intelligence, which motivates them to train in a context that prioritizes sustainable practices and regulatory compliance"

Average Age

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

Years of Experience

More than 15 years **19%**

10 to 15 years **34%**

5-10 years **31%**

5 years **16%**

Training

Business and Economics **29%**

Engineering **41%**

Artificial Intelligence **15%**

Other **15%**

Academic Profile

Industry **41%**

Services **24%**

Entrepreneurs **26%**

Other **9%**
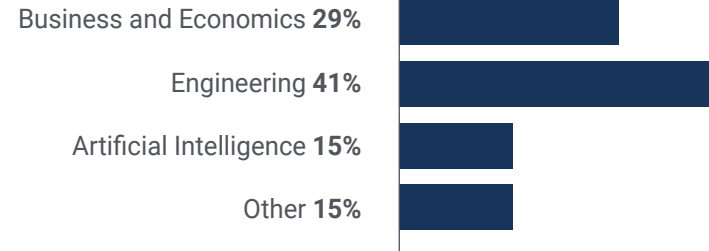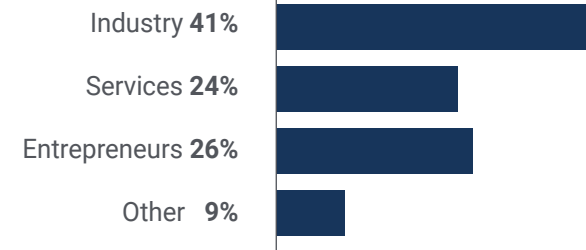
Geographical Distribution

USA **12%**

Spain **45%**

Mexico **28%**

Colombia **15%**
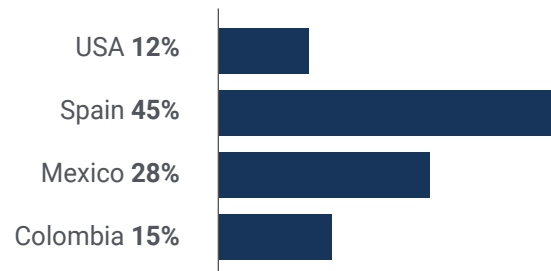
Santiago Ramírez Utrera

Financial Analyst

"After finishing the Postgraduate Diploma in Data Processing and Trading with Artificial Intelligence at TECH, and I have to say it has been a great experience. I learned a lot about Big Data and how to apply it to financial analysis, which has helped me in my job as a Financial Analyst. I now know how to process data in real time and use Artificial Intelligence to make more accurate predictions. In addition, I was given tools to understand the ethical side of all this, which is super important nowadays. In short, everything I learned has given me a good head start on the job and I feel more prepared than ever to face the challenges to come. Highly recommended!"

08
Course Management

The faculty are highly qualified professionals with experience in academia and the financial industry. In fact, they include renowned researchers in the field of Big Data and data analytics, as well as professionals who have worked in leading technology and finance companies. As such, their pedagogical approach will combine theory and practice, using real cases and market tools to facilitate student learning. They will also foster an environment of collaboration and discussion, allowing graduates to benefit from their knowledge and experience.

The extensive experience of teachers in Artificial Intelligence, Stock Exchange and Financial Markets will not only enrich the training, but will also prepare you to meet any challenge in the working world"

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

Mr. Sánchez Mansilla, Rodrigo

- Digital Advisor at AI 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"

Impact on Your Career

By mastering Big Data technologies and advanced data analysis techniques, entrepreneurs will be able to excel in key roles within the financial and technology sector. As a result, they will be able to improve their ability to make informed decisions and develop more effective trading strategies, which will translate into better job opportunities and accelerated professional growth. In addition, by focusing on ethical and regulatory issues, they will be well prepared to face the contemporary challenges of the industry, becoming responsible and competent professionals who can lead in an increasingly competitive and innovative environment.

tech

This Postgraduate Diploma will not only enrich your resume, but will also open doors to positions of greater responsibility and prestige in your career. With all the TECH quality guarantees!"

You will contribute to the development of sustainable and ethical practices in the financial sector, increasing your employability and preparing you to successfully meet the future challenges of the industry.

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

TECH's Postgraduate Diploma in Data Processing and Trading with Artificial Intelligence is an intensive program that prepares you to face challenges and business decisions in the field of Artificial Intelligence applied to the Stock Market and Financial Markets. 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 gain practical skills in the implementation of tools and techniques that facilitate the analysis of large volumes of data, optimizing decision making in dynamic trading environments.

Time of Change

During the program **11%**	During the first year **63%**	After 2 years **26%**

Type of change

Internal Promotion **47%**

Change of Company **45%**

Entrepreneurship **8%**
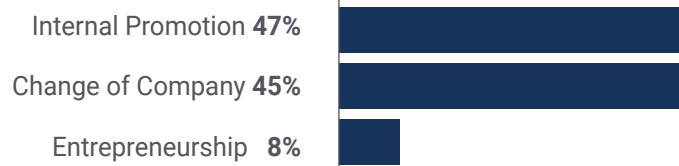
Salary increase

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

Salary before	A salary increase	Salary after
$52,000	**26.24%**	**$65,644**

10

Benefits for Your Company

By acquiring advanced knowledge in Big Data and Artificial Intelligence techniques, entrepreneurs will be able to optimize their decision-making processes and improve the accuracy of their market analysis, identifying more profitable investment opportunities and minimizing risks. In addition, by understanding how to implement technological tools for real-time data analysis, they will be able to respond more agile and effectively to market dynamics. A focus on ethics and regulation will also be critical, helping them to establish responsible practices and ensure regulatory compliance.

This Postgraduate Diploma in Data Processing and Trading with Artificial Intelligence will offer entrepreneurs a number of key benefits that can transform their businesses"

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

01

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.

02

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.

03

Building agents of change

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

04

Increased international expansion possibilities

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

05

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.

06

Increased competitiveness

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

11
Certificate

The Postgraduate Diploma in Data Processing and Trading with Artificial Intelligence guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Global University.

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

This private qualification will allow you to obtain a **Postgraduate Diploma in Data Processing and Trading 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 Data Processing and Trading with Artificial Intelligence**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**

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Mr./Ms. _____, with identification document _____ has successfully passed and obtained the title of:

Postgraduate Diploma in Data Processing and Trading with Artificial Intelligence

This is a private qualification of 540 hours of duration equivalent to 18 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

Dr. Pedro Navarro Illana
Dean

Unique TECH Code: AFWORD23S   techtitute.com/certificates

Postgraduate Diploma
Data Processing and Trading with Artificial Intelligence

- » Modality: **online**
- » Duration: **6 months**
- » Certificate: **TECH Global University**
- » Acreditation: **18 ECTS**
- » Schedule: **at your own pace**
- » Exams: **online**

Postgraduate Diploma
Data Processing and Trading with
Artificial Intelligence

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