

Postgraduate Diploma Machine Learning Applied to Trading



Postgraduate Diploma Machine Learning Applied to Trading

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

Website: www.techtute.com/us/school-of-business/postgraduate-diploma/postgraduate-diploma-machine-learning-applied-trading

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01

Introduction to the Program

Machine Learning is redefining the financial landscape, enabling systems to identify complex patterns and execute trades with unprecedented precision. According to the Association of Financial Markets in Europe (AFME), more than 75% of equity market trades are executed using algorithms. Considering the current relevance of this field, TECH has designed this comprehensive postgraduate program that will provide the most prominent knowledge. Through a 100% online methodology, professionals will master the adoption of advanced predictive models, being capable of leading the future of investments and capital management in an increasingly automated and competitive market.



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With this comprehensive and 100% online program, you will acquire the knowledge and tools necessary to stand out in the field of Machine Learning Applied to Trading”

The global financial sector is currently undergoing a profound digital transformation. In this context, the ability to process massive amounts of data at lightning-fast speeds, along with the skill to uncover hidden correlations and predict price movements, has positioned Machine Learning as an indispensable tool in Algorithmic Trading. Therefore, those seeking to excel in this field must not only master the fundamentals of the market but also advanced artificial intelligence techniques to optimize investment decisions.

In response to this, TECH offers a program in Machine Learning Applied to Trading, which will provide professionals with the essential theoretical knowledge and practical skills to understand, develop, and implement Machine Learning models directly applied to finance. With a comprehensive approach, the program will cover everything from evaluating predictive models and optimizing strategies with Artificial Intelligence, to implementing algorithms in real-world environments and managing alternative data.

Thanks to this academic offering, entrepreneurs will be able to become highly sought-after experts by financial institutions, fintech companies, and investment firms, with the ability to develop innovative and adaptive solutions in high-uncertainty environments. In fact, this advanced training will open doors to new professional horizons, allowing individuals to take on leadership roles in projects that integrate data science and finance, a profile increasingly valued in the global job market.

Additionally, this university qualification comes with a 100% online methodology, providing the flexibility needed for professionals to balance their academic development with work and personal commitments. The course material will be accessible 24 hours a day, 7 days a week, from any device with an internet connection. Lastly, the learning process will be enhanced by the implementation of the Relearning method, which facilitates the assimilation of key concepts through repetition.

This **Postgraduate Diploma in Machine Learning Applied to Trading** contains the most complete and up-to-date program on the market. The most important features include:

- ♦ The development of practical cases presented by experts in Machine Learning Applied to Trading
- ♦ The graphic, schematic, and practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ♦ Practical exercises where self-assessment can be used to improve learning
- ♦ Its special emphasis on innovative methodologies
- ♦ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ♦ Content that is accessible from any fixed or portable device with an internet connection



With the best academic materials, you will train to master investment automation and data analysis with Machine Learning in financial markets”

“

A comprehensive and 100% online university program to master Machine Learning applied to Trading and the programming of strategies for financial markets”

The faculty includes professionals from the field of Machine Learning Applied to Trading, who bring their work experience to this program, alongside recognized specialists from leading firms and prestigious universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive learning experience designed to prepare for real-life situations.

This program is designed around Problem-Based Learning, whereby the student must try to solve the different professional practice situations that arise throughout the program. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced experts.

TECH will provide you with the most innovative teaching methodology in today's academic landscape.

This academic opportunity will allow you to learn at any time and from anywhere in the world.



02

Why Study at TECH?

TECH is the world's largest online university. With an impressive catalog of more than 14,000 university programs available in 11 languages, it is positioned as a leader in employability, with a 99% job placement rate. In addition, it relies on an enormous faculty of more than 6,000 professors of the highest international renown.



“

*Study at the world's largest online university
and guarantee your professional success.
The future starts at TECH”*

The world's best online university, according to FORBES

The prestigious Forbes magazine, specialized in business and finance, has highlighted TECH as "the best online university in the world" This is what they have recently stated in an article in their digital edition in which they echo the success story of this institution, "thanks to the academic offer it provides, the selection of its teaching staff, and an innovative learning method oriented to form the professionals of the future".

Forbes

The best online university in the world

The most complete
syllabus

The most complete syllabuses on the university scene

TECH offers the most complete syllabuses on the university scene, with programs that cover fundamental concepts and, at the same time, the main scientific advances in their specific scientific areas. In addition, these programs are continuously updated to guarantee students the academic vanguard and the most demanded professional skills. and the most in-demand professional competencies. In this way, the university's qualifications provide its graduates with a significant advantage to propel their careers to success.

The best top international faculty

TECH's faculty is made up of more than 6,000 professors of the highest international prestige. Professors, researchers and top executives of multinational companies, including Isaiah Covington, performance coach of the Boston Celtics; Magda Romanska, principal investigator at Harvard MetaLAB; Ignacio Wistumba, chairman of the department of translational molecular pathology at MD Anderson Cancer Center; and D.W. Pine, creative director of TIME magazine, among others.

TOP
international faculty

The most effective methodology

A unique learning method

TECH is the first university to use Relearning in all its programs. This is the best online learning methodology, accredited with international teaching quality certifications, provided by prestigious educational agencies. In addition, this innovative academic model is complemented by the "Case Method", thereby configuring a unique online teaching strategy. Innovative teaching resources are also implemented, including detailed videos, infographics and interactive summaries.

The world's largest online university

TECH is the world's largest online university. We are the largest educational institution, with the best and widest digital educational catalog, one hundred percent online and covering most areas of knowledge. We offer the largest selection of our own degrees and accredited online undergraduate and postgraduate degrees. In total, more than 14,000 university programs, in ten different languages, making us the largest educational institution in the world.

World's No.1
The World's largest online university

The official online university of the NBA

TECH is the official online university of the NBA. Thanks to our agreement with the biggest league in basketball, we offer our students exclusive university programs, as well as a wide variety of educational resources focused on the business of the league and other areas of the sports industry. Each program is made up of a uniquely designed syllabus and features exceptional guest hosts: professionals with a distinguished sports background who will offer their expertise on the most relevant topics.

Leaders in employability

TECH has become the leading university in employability. Ninety-nine percent of its students obtain jobs in the academic field they have studied within one year of completing any of the university's programs. A similar number achieve immediate career enhancement. All this thanks to a study methodology that bases its effectiveness on the acquisition of practical skills, which are absolutely necessary for professional development.



Google Premier Partner

The American technology giant has awarded TECH the Google Premier Partner badge. This award, which is only available to 3% of the world's companies, highlights the efficient, flexible and tailored experience that this university provides to students. The recognition not only accredits the maximum rigor, performance and investment in TECH's digital infrastructures, but also places this university as one of the world's leading technology companies.

The top-rated university by its students

Students have positioned TECH as the world's top-rated university on the main review websites, with a highest rating of 4.9 out of 5, obtained from more than 1,000 reviews. These results consolidate TECH as the benchmark university institution at an international level, reflecting the excellence and positive impact of its educational model.

03 Syllabus

The teaching materials for this Postgraduate Diploma have been developed by a team of leading professionals in quantitative finance, programming, and financial markets. Thanks to this, the syllabus will cover everything from the philosophy and strategies of Algorithmic Trading (intraday and swing models) to system architecture and data usage. Moreover, the syllabus will delve into advanced financial analysis, decision-making psychology, Machine Learning applied to Trading, and taxation, preparing graduates to master investment automation and navigate the complexity of today's financial markets.





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You will immerse yourself in Machine Learning applied to Trading, from algorithm programming to risk analysis and taxation, equipping yourself to invest in the financial markets of the future”

Module 1. Fundamentals of Algorithmic Trading

- 1.1. Philosophy of Algorithmic Trading
 - 1.1.1. Advantages of Algorithmic Trading over Manual Trading
 - 1.1.2. Evolution and Adoption in the Markets
 - 1.1.3. Differences with Discretionary Trading
- 1.2. Intraday Algorithmic Strategies
 - 1.2.1. Characteristics of Intraday Investment Strategies
 - 1.2.2. Advanced Study of Intraday Strategies
 - 1.2.3. Profitability and Risk of These Strategies
- 1.3. Swing Algorithmic Strategies
 - 1.3.1. Characteristics of Continuous Investment
 - 1.3.2. Advanced Study of Continuous Trading Systems
 - 1.3.3. Profitability and Risk of These Strategies
- 1.4. Architecture of an Algorithmic Trading System
 - 1.4.1. Key Components
 - 1.4.2. Data Flow and Execution
 - 1.4.3. Integration with Market APIs
- 1.5. Data Sources in Algorithmic Trading
 - 1.5.1. Historical and Real-Time Data
 - 1.5.2. Data Quality and Cleansing
 - 1.5.3. Free and Paid Sources
- 1.6. Latency and Speed in Algorithmic Trading
 - 1.6.1. Importance of Fast Execution
 - 1.6.2. Factors Affecting Latency
 - 1.6.3. Co-location and High-Frequency Trading
- 1.7. Performance Metrics
 - 1.7.1. Metrics Based on Profitability
 - 1.7.2. Drawdown Analysis
 - 1.7.3. Metrics Based on Hit Rate
 - 1.7.4. Metrics Based on Risk Management



- 1.8. Backtesting and Strategy Validation
 - 1.8.1. Backtesting Methods
 - 1.8.2. Avoiding Overfitting
 - 1.8.3. Performance Evaluation
 - 1.9. Infrastructure and Hardware for Algorithmic Trading
 - 1.9.1. Dedicated Servers vs. *Cloud Computing*
 - 1.9.2. Networks and Connectivity
 - 1.9.3. Security and Maintenance
 - 1.10. Limitations and Challenges of Algorithmic Trading
 - 1.10.1. Complexity and Costs
 - 1.10.2. Risks of Technical Failures
 - 1.10.3. Adaptability to Changing Conditions
- Module 2. Typology, Logic, and Design of Algorithmic Trading Strategies**
- 2.1. Momentum and Trend Following Strategies
 - 2.1.1. Identifying Trends
 - 2.1.2. Indicators and Filters
 - 2.1.3. Implementation in Code
 - 2.2. Mean Reversion Strategies
 - 2.2.1. Mean Reversion Investment
 - 2.2.2. Application in Different Markets
 - 2.2.3. Statistical Models
 - 2.3. Statistical Arbitrage and Pairs Trading
 - 2.3.1. Identifying Correlated Pairs
 - 2.3.2. Cointegration Models
 - 2.3.3. Execution and Risk Management
 - 2.4. Market Making and Liquidity Provision
 - 2.4.1. How Market Makers Operate
 - 2.4.2. Strategies to Capture the Spread
 - 2.4.3. Risks and Optimization
 - 2.5. Volume-Based and Order Flow Strategies
 - 2.5.1. Order Flow Analysis
 - 2.5.2. Impact of Volume on Price
 - 2.5.3. Identifying Opportunities
 - 2.6. Event and News-Based Strategies
 - 2.6.1. Trading on Macroeconomic Events
 - 2.6.2. Sentiment Analysis in News
 - 2.6.3. Automation of News-Based Trading
 - 2.7. High-Frequency Trading (HFT) Strategies
 - 2.7.1. Characteristics of HFT
 - 2.7.2. Ultra-Fast Execution Algorithms
 - 2.7.3. Technological Requirements
 - 2.8. Hybrid Strategies and Combinations
 - 2.8.1. Integrating Multiple Strategies
 - 2.8.2. Algorithmic Portfolio Management
 - 2.8.3. Diversification and Risk Control
 - 2.9. Optimization and Adaptation of Strategies
 - 2.9.1. Parameter Adjustment
 - 2.9.2. Machine Learning in Optimization
 - 2.9.3. Adaptability to Market Changes
 - 2.10. Ethical and Regulatory Considerations
 - 2.10.1. Regulations on Algorithmic Trading
 - 2.10.2. Market Manipulation Issues
 - 2.10.3. Ethics in the Use of Financial Algorithms

Module 3. Quantitative Analysis and Machine Learning in Algorithmic Trading

- 3.1. Fundamentals of Quantitative Analysis
 - 3.1.1. Key Characteristics of Quantitative Analysis
 - 3.1.2. Probabilistic Models in Trading
 - 3.1.3. Use of Statistics in Financial Markets
- 3.2. Mathematical Models Applied to Trading
 - 3.2.1. Time Series Models
 - 3.2.2. Regression and Correlations
 - 3.2.3. Volatility Models
- 3.3. Machine Learning in Algorithmic Trading
 - 3.3.1. Advanced Understanding of Machine Learning
 - 3.3.2. Supervised Learning Algorithms
 - 3.3.3. Unsupervised Learning Algorithms
 - 3.3.4. Reinforcement Learning Algorithms
 - 3.3.5. Benefits and Risks
- 3.4. Neural Networks and Deep Learning in Algorithmic Trading
 - 3.4.1. Applications of Neural Networks
 - 3.4.2. Price Prediction Models
 - 3.4.3. Limitations and Challenges
- 3.5. Advanced Backtesting with Machine Learning
 - 3.5.1. Evaluation of Predictive Models
 - 3.5.2. Cross-Validation
 - 3.5.3. Avoiding Overfitting
- 3.6. Optimization of Strategies with Artificial Intelligence
 - 3.6.1. Genetic Algorithms
 - 3.6.2. Reinforcement in Trading
 - 3.6.3. AutoML in Finance
- 3.7. Risk Factors in Quantitative Models
 - 3.7.1. Biases in Data
 - 3.7.2. Overfitting and Noisy Data
 - 3.7.3. Model Robustness



- 3.8. Implementation of ML Strategies in Real Environments
 - 3.8.1. Deployment in Production
 - 3.8.2. Model Monitoring
 - 3.8.3. Adapting to Market Changes
- 3.9. Use of Alternative Data in Trading
 - 3.9.1. Social Media and Market Sentiment
 - 3.9.2. Satellite and Alternative Data
 - 3.9.3. Other Sentiment Indicators
- 3.10. Ethics and Regulation in the Use of AI in Trading
 - 3.10.1. Algorithmic Biases
 - 3.10.2. Emerging Regulations
 - 3.10.3. Responsibility in Decision Making

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You will gain a comprehensive mastery of this sector, understanding the markets, the design and optimization of advanced strategies, and risk management”

04

Teaching Objectives

The design of this program aims to equip finance professionals with cutting-edge quantitative and technological skills, enabling them to master the programming and execution of automated trading strategies. In doing so, participants will develop proficiency in interpreting machine learning models and managing algorithmic risk. This academic opportunity will therefore enhance graduates' capacity to optimize investment decisions, analyze large volumes of financial data, and lead the implementation of AI-based trading systems, offering innovative solutions to contemporary market challenges.



“

Transform your financial skill set: master Machine Learning applied to Trading to uncover hidden patterns and optimize strategies in line with market demands”



General Objectives

- ◆ Develop advanced knowledge of Machine Learning applied to Trading, understanding its impact and potential in the optimization of financial strategies
- ◆ Identify the applications of machine learning algorithms in stock market analysis, asset valuation, and the prediction of market movements
- ◆ Implement supervised, unsupervised, and reinforcement learning models for the development of robust and efficient algorithmic trading strategies
- ◆ Integrate the use of neural networks and deep learning in the creation of predictive models for prices and market patterns
- ◆ Apply advanced backtesting and optimization techniques with artificial intelligence to validate and fine-tune highly complex trading strategies
- ◆ Utilize alternative data and market sentiment analysis to enhance predictive models based on Machine Learning
- ◆ Design and customize algorithmic trading strategies, incorporating principles of risk management and accounting for market-specific characteristics
- ◆ Promote continuous training in Machine Learning and its ethical and regulatory implementation in financial environments, ensuring professionals remain up to date with the latest innovations





Specific Objectives

Module 1. Fundamentals of Algorithmic Trading

- Explore a comprehensive overview of financial markets and their key components
- Analyze the philosophy of Algorithmic Trading and its advantages over manual trading approaches
- Identify various financial instruments and understand the structural organization of the markets
- Understand market microstructure and its influence on trading strategies

Module 2. Typology, Logic, and Design of Algorithmic Trading Strategies

- Analyze major algorithmic strategies such as Momentum, Trend Following, and Mean Reversion, evaluating their theoretical foundations and practical applications across different market conditions
- Examine statistical arbitrage techniques and Pairs Trading, with an in-depth study of cointegration models and associated risk management methodologies
- Design and implement Market Making strategies and order flow analysis, considering the impact of volume and liquidity on algorithmic operations
- Evaluate the use of event-driven, news-based, and high-frequency trading strategies, taking into account both technological requirements and the ethical and regulatory implications

Module 3. Quantitative Analysis and Machine Learning in Algorithmic Trading

- Apply mathematical and statistical models to the quantitative analysis of financial markets, including time series, regression, correlation, and volatility
- Understand and implement Machine Learning algorithms (supervised, unsupervised, and reinforcement learning) for price prediction and decision-making in algorithmic environments
- Design advanced backtesting processes and validate predictive models using Artificial Intelligence techniques to ensure robustness and generalizability
- Integrate alternative data, neural networks, and Deep Learning techniques into trading strategies, considering risk factors, algorithmic ethics, and the applicable regulatory framework



Refine your skills in programming and strategy analysis, risk management, and the psychology of trading to operate successfully in today's financial markets"

05

Career Opportunities

Thanks to their mastery of advanced algorithms, predictive models, and quantitative analysis, graduates of this program will be strategically positioned in key sectors such as investment banking, hedge funds, fintech companies, and algorithmic trading platforms. Moreover, the growing value of data and its application to real-time decision-making will enable these professionals to assume high-level roles as quant traders, financial data scientists, automated strategy designers, or consultants in AI applied to financial markets.



“

Advance your career in finance and master the design of algorithmic strategies using Machine Learning, unlocking a wide range of opportunities in high-tech trading”

Graduate Profile

Graduates of this program will master the application of Machine Learning to trading in order to optimize investment decisions in financial markets. Accordingly, they will be capable of developing and validating algorithmic strategies, possess a deep understanding of quantitative analysis and market microstructure, and be able to implement and monitor automated trading systems. Moreover, these experts will be prepared to manage the risks associated with such operations and will understand the ethical and regulatory aspects of Artificial Intelligence in finance, bringing added value to complex environments.

You will develop a cutting-edge profile that will allow you to execute innovative investment strategies in global finance.

- ♦ **Design and Optimization of Strategies with Machine Learning:** Conceptualize, program, and implement algorithmic trading strategies, using Machine Learning algorithms to analyze and optimize their performance in financial markets
- ♦ **Advanced Quantitative Analysis and Market Microstructure:** Interpret large volumes of financial data, apply statistical and Machine Learning models, and understand market microstructure to identify investment opportunities
- ♦ **Ethical Commitment and Risk Management:** Apply ethical principles and regulatory frameworks in the development and execution of trading algorithms, ensuring transparency and effective mitigation of financial and operational risks associated with automation
- ♦ **Interdisciplinary Collaboration:** Work effectively with finance professionals, programmers, data analysts, and other specialists, facilitating the development and implementation of algorithmic trading systems based on Machine Learning





After completing this university, you will be able to apply your knowledge and skills in the following positions:

1. **Quantitative Trader (Quant Trader):** responsible for designing, building, and executing algorithmic trading strategies based on quantitative models and Machine Learning in financial markets.
2. **Algorithmic Trading Developer:** in charge of programming, optimizing, and maintaining automated trading systems, integrating Machine Learning functionalities to enhance their efficiency.
3. **Algorithmic Portfolio Manager:** leads the management and optimization of investment portfolios using quantitative models and Machine Learning algorithms for asset allocation and active management.
4. **Financial Data Analyst:** responsible for collecting, cleaning, processing, and interpreting large volumes of market data, applying Machine Learning techniques to uncover patterns and trends relevant to trading.
5. **Head of Machine Learning for Finance:** oversees the research and application of artificial intelligence and deep learning algorithms for price prediction and performance enhancement in financial strategies.
6. **Quantitative Trading Operator:** responsible for the real-time supervision and adjustment of trading algorithms, ensuring their proper functioning and adaptability to market conditions.
7. **Fintech Software Developer with Specialization in Trading:** tasked with creating innovative technological solutions for trading infrastructure, investment platforms, and financial analysis tools based on Machine Learning.
8. **Researcher in Quantitative Finance and Algorithmic Trading:** leads research and development projects on new theories and methodologies for algorithmic trading, with a strong focus on Machine Learning and predictive analytics.

06

Study Methodology

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

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



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TECH will prepare 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.

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*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.



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 teaching quality, the quality of the materials, the structure of the program and its objectives is excellent. Not surprisingly, the institution became the top-rated university by its students according to the global score index, 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.

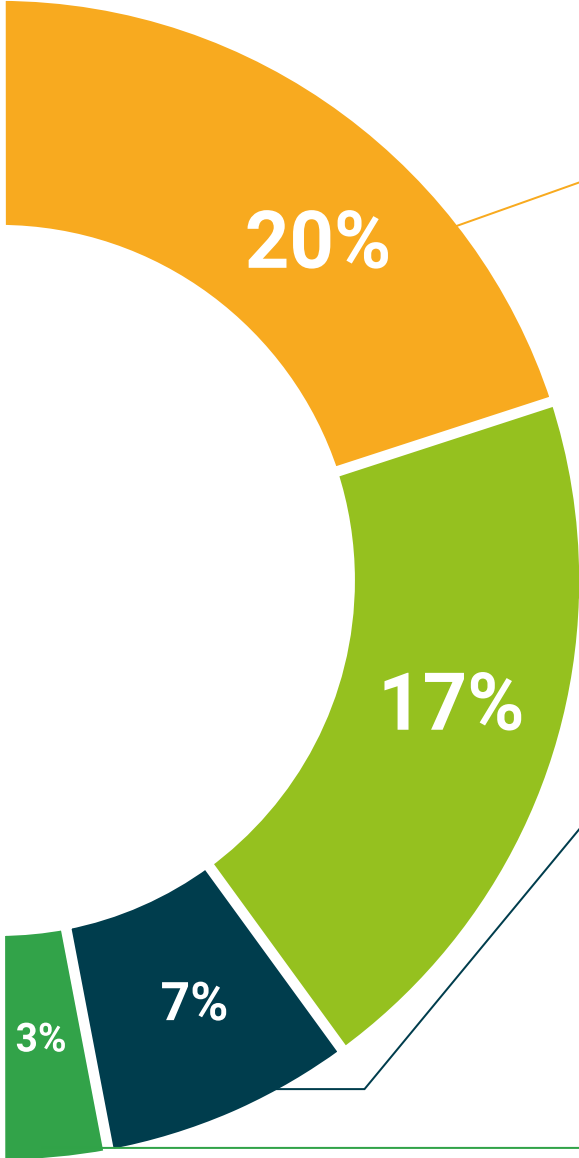
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



Additional Reading

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





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.



07

Teaching Staff

The faculty team has been carefully selected for its strong professional and academic background in Algorithmic Trading and Machine Learning applied to finance. These professionals not only possess deep theoretical knowledge but also have extensive hands-on experience in the implementation of quantitative strategies, analysis of large volumes of financial data, and real-time risk management. Their expertise in programming tools and AI models ensures that graduates receive training grounded in the latest trends and best practices in the field.



“

This elite faculty, composed of leading experts in Machine Learning and quantitative finance, will guide you with real-world insight and a forward-looking perspective on global markets”

Management



Dr. Gómez Martínez, Raúl

- ♦ Founding Partner and CEO of Open 4 Blockchain Fintech
- ♦ Founding Partner of *InvestMood Fintech*
- ♦ Apara's CEO
- ♦ PhD in Business Economics and Finance from the University Rey Juan Carlos de Madrid
- ♦ Bachelor's Degree in Economics and Business Administration, Complutense University of Madrid
- ♦ Master's Degree in Economic Analysis and Financial Economics, Complutense University of Madrid



Dr. Lara Bocanegra, Ana María

- ♦ Company Owner (Financial)
- ♦ Ph.D. from the University of Seville
- ♦ Trader of NYSE Stocks at World Trade Securities
- ♦ Junior Trader at Swiftrad
- ♦ Mechanical Behaviour of Materials from University of Seville
- ♦ Experimental Techniques II from University of Seville
- ♦ Materials Science from University of Seville
- ♦ Advanced Trading Stocks Techniques from University of Seville

Teachers

Mr. Martín Moreno, David

- ♦ Specialist in Financial Management by European University Miguel de Cervantes Business School
- ♦ Master's Degree in Financial Planning and Advice, Rey Juan Carlos University
- ♦ Bachelor's Degree in Accounting and Finance from Rey Juan Carlos University

Mr. Segura Pacho, Felipe Marcelo

- ♦ Back Office at Indra BPO Services SLU
- ♦ Accountant at JC Segura Construcciones SA
- ♦ Specialist in Corporate Finance at the Catholic University of Salta
- ♦ Master's Degree in Financial Planning and Advice from the Rey Juan Carlos University
- ♦ Master's Degree in Business Management from the Public University of Navarra
- ♦ Collaborator of the project "Trading in Stock Exchange and Financial Markets"



A unique, essential and decisive learning experience to boost your professional development"

08

Certificate

This Postgraduate Diploma in Machine Learning Applied to Trading guarantees students, in addition to the most rigorous and up-to-date education, access to a diploma for the Postgraduate Diploma 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 diploma for the **Postgraduate Diploma in Machine Learning Applied to Trading** 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.

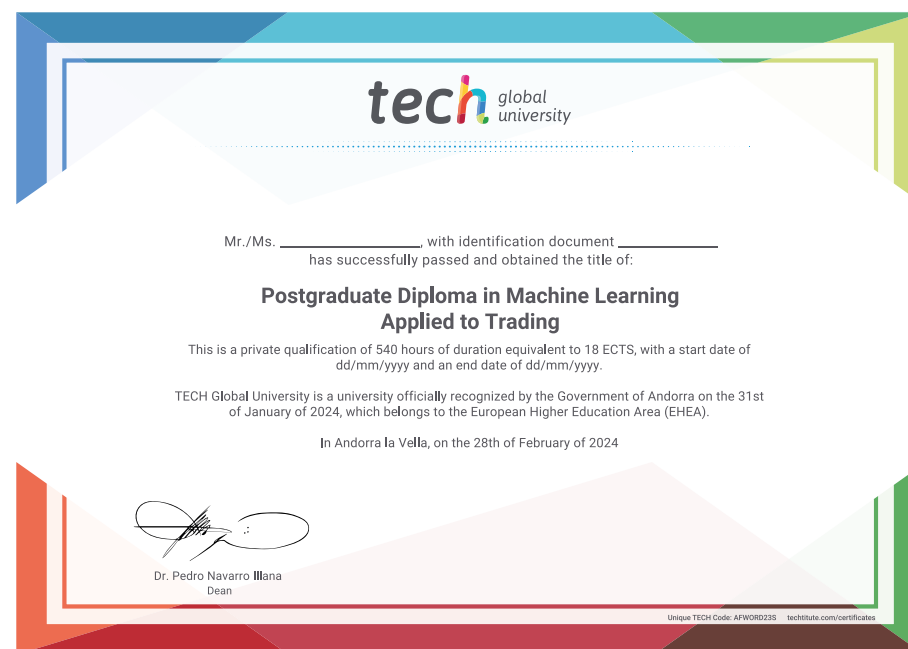
This **TECH Global University** private qualification, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Machine Learning Applied to Trading**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**



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

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



Postgraduate Diploma
Machine Learning
Applied to Trading

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Postgraduate Diploma Machine Learning Applied to Trading

