

# Postgraduate Diploma Clinical Data Analysis and Personalization of Medical Treatments using Artificial Intelligence





## Postgraduate Diploma Clinical Data Analysis and Personalization of Medical Treatments using Artificial Intelligence

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

Website: [www.techtitute.com/us/artificial-intelligence/postgraduate-diploma/postgraduate-diploma-clinical-data-analysis-personalization-medical-treatments-artificial-intelligence](http://www.techtitute.com/us/artificial-intelligence/postgraduate-diploma/postgraduate-diploma-clinical-data-analysis-personalization-medical-treatments-artificial-intelligence)

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# 01

# Introduction

The implementation of Artificial Intelligence (AI) algorithms in pharmaceutical research is beneficial for accelerating the drug discovery process and improving efficiency in drug development. These mechanisms can predict how candidate molecules interact with their biological targets, which helps to identify promising compounds that could be effective in addressing diseases. Furthermore, Machine Learning is able to analyze large volumes of data efficiently, which facilitates the localization of biomarkers, therapeutic targets and drug response patterns. In this context, TECH has developed a complete program that will delve into the analysis of Big Data in the health sector through a flexible 100% online format.





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*Effectively manage Big Data  
at the best digital university in  
the world according to Forbes”*

Machine Learning applications in genomics for personalized medicine are fundamental to take advantage of an individual's genetic information and tailor medical treatments in a patient-specific way. For example, AI algorithms can calculate users' genetic risk for hereditary diseases such as breast cancer, cardiovascular conditions or diabetes. In this way, healthcare professionals perform more thorough follow-ups and take targeted preventive measures to reduce the dangers. In addition, this intelligent system is used to determine which pharmacological treatments are most effective for each individual. This helps to personalize therapies and reduces the possibility of drug side effects.

Therefore, TECH implements an advanced program that will address in detail the personalization of health through Artificial Intelligence. The curriculum will delve into the development of models to predict drug efficacy and safety. Likewise, the curriculum will focus on the implementation of early warning systems based on Machine Learning for health conditions. On the other hand, the academic itinerary will emphasize the adoption of ethical principles in the development and use of these systems. In this way, graduates will develop governance frameworks for the deontological and efficient management of data in medical Artificial Intelligence applications.

At the same time, the methodology implemented in this program reinforces its innovative character. TECH offers a 100% online educational environment, adapted to the needs of working professionals seeking to boost their skills. Likewise, it employs the Relearning teaching system, based on the repetition of key concepts to fix knowledge and facilitate learning. In this way, the combination of flexibility and a robust pedagogical approach makes it highly accessible. Students will also have access to a library full of multimedia resources in different audiovisual formats such as interactive summaries and infographics.

This **Postgraduate Diploma in Clinical Data Analysis and Personalization of Medical Treatments using Artificial Intelligence** contains the most complete and up-to-date program on the market. Its most notable features are:

- ♦ Development of practical cases presented by experts in Artificial Intelligence in Clinical Practice
- ♦ 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



*You will implement Artificial Intelligence tools in Electronic Medical Records to detect pathologies early"*

“

*You will delve, through this academic itinerary, into the importance of Ethics during the development of Artificial Intelligence medical systems"*

The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies 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 immersive education programmed to learn in real situations.

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

*You will comprehensively analyze the predictive models essential for personalized clinical practice thanks to this revolutionary program.*

*You will achieve your objectives thanks to TECH's didactic tools, including explanatory videos and interactive summaries.*



# 02 Objectives

Thanks to this Postgraduate Diploma, graduates will master the emerging trends in Artificial Intelligence applied to individualized health. As a result, professionals will drive medical treatments ranging from genomic analysis to pain management. In tune with this, they will acquire solid knowledge about obtaining, filtering and preprocessing medical data. In this way, physicians will develop a clinical approach that will be distinguished by its integrity in the management of personal data. They will also apply essential ethical principles to their work practice and comply with legal regulations for the implementation of intelligent robotics in medicine.





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*Don't miss the opportunity to boost your career through this innovative program"*



## General Objectives

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- Understand the theoretical foundations of Artificial Intelligence
- Study the different types of data and understand the data lifecycle
- Evaluate the crucial role of data in the development and implementation of AI solutions
- Delve into algorithms and complexity to solve specific problems
- Explore the theoretical basis of neural networks for Deep Learning development
- Analyze bio-inspired computing and its relevance in the development of intelligent systems
- Analyze current strategies of Artificial Intelligence in various fields, identifying opportunities and challenges
- Critically evaluate the benefits and limitations of AI in healthcare, identifying potential pitfalls and providing an informed assessment of its clinical application
- Recognize the importance of collaboration across disciplines to develop effective AI solutions
- Gain a comprehensive perspective on emerging trends and technological innovations in AI applied to healthcare
- Acquire solid knowledge in medical data acquisition, filtering, and preprocessing
- Understand the ethical principles and legal regulations applicable to the implementation of AI in medicine, promoting ethical practices, fairness, and transparency





## Specific Objectives

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### Module 1. Health Personalization through AI

- Delve into emerging trends in AI applied to personalized healthcare and their future impact
- Define the applications of AI to personalize medical treatments, ranging from genomic analysis to pain management
- Differentiate specific AI algorithms for the development of applications related to drug design or surgical robotics
- Delineate emerging trends in AI applied to personalized health and their future impact
- Promote innovation through the creation of strategies aimed at improving medical care

### Module 2. Analysis of *Big Data* in the Healthcare Sector with AI

- Acquire solid knowledge in medical data procurement, filtering, and preprocessing
- Develop a clinical approach based on data quality and integrity in the context of privacy regulations
- Apply the acquired knowledge in use cases and practical applications, enabling to understand and solve industry-specific challenges, from text analytics to data visualization and medical information security
- Define Big Data techniques specific to the healthcare sector, including the application of machine learning algorithms for analytics
- Employ Big Data procedures to track and monitor the spread of infectious diseases in real time for effective response to epidemics

### Module 3. Ethics and Regulation in Medical AI

- Understand the fundamental ethical principles and legal regulations applicable to the implementation of AI in medicine
- Master the principles of data governance
- Understand international and local regulatory frameworks
- Ensure regulatory compliance in the use of AI data and tools in the healthcare sector
- Develop skills to design human-centered AI systems, promoting fairness and transparency in machine learning



*This online methodology allows you, through case studies, to practice in simulated environments"*

# 03

# Course Management

In order to maintain intact the educational excellence that characterizes it, TECH has a first class teaching staff. These professionals have extensive work experience, which has allowed them to integrate the teams of prestigious hospitals. Therefore, the syllabus is characterized by having the most updated and complete contents in Clinical Data Analysis and Personalization of Medical Treatments through Machine Learning. In addition, they provide students with the most advanced technological tools to contribute to the wellbeing of their patients.





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*The leading experts in Artificial Intelligence have joined forces to share with you all their knowledge in this field”*

## Management



### Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometheus Global Solutions
- CTO at Korporate Technologies
- CTO at AI Shephers GmbH
- Consultant and Strategic Business Advisor at Alliance Medical
- Director of Design and Development at DocPath
- Ph.D. in Psychology from the University of Castilla - La Mancha
- Ph.D. 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 por la Universidad Isabel I
- 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: SMILE Research Group



### Mr. Martín-Palomino Sahagún, Fernando

- ♦ *Chief Technology Officer and R+D+i Director at AURA Diagnostics (medTech)*
- ♦ *Business Development at SARLIN*
- ♦ *Operations Director at Alliance Diagnostics*
- ♦ *Innovation Director at Alliance Diagnostics*
- ♦ *Chief Information Officer at Alliance Medical*
- ♦ *Field Engineer & Project Management in Digital Radiology at Kodak*
- ♦ *MBA at Polytechnic University of Madrid*
- ♦ *Executive Master's Degree in Marketing and Sales, ESADE*
- ♦ *Telecommunications Engineer from the University Alfonso X El Sabio*

## Professors

### Dr. Carrasco González, Ramón Alberto

- ♦ *Computer Science and Artificial Intelligence Specialist*
- ♦ *Researcher*
- ♦ *Head of Business Intelligence (Marketing) at Caja General de Ahorros de Granada and Banco Mare Nostrum*
- ♦ *Head of Information Systems (Data Warehousing and Business Intelligence) at Caja General de Ahorros de Granada and Banco Mare Nostrum.*
- ♦ *Ph.D. in Artificial Intelligence, University of Granada*
- ♦ *Computer Engineer from the University of Granada*

### Mr. Popescu Radu, Daniel Vasile

- ♦ *Pharmacology, Nutrition and Diet Specialist*
- ♦ *Freelance Producer of Didactic and Scientific Contents*
- ♦ *Nutritionist and Community Dietitian*
- ♦ *Community Pharmacist*
- ♦ *Researcher*
- ♦ *Master's Degree in Nutrition and Health at the Universidad Oberta de Catalunya*
- ♦ *Master's Degree in Psychopharmacology, University of Valencia*
- ♦ *Pharmacist by the Complutense University of Madrid*
- ♦ *Nutritionist-Dietician by the European University Miguel de Cervantes*

# 04

## Structure and Content

This program will delve into the impact of Artificial Intelligence in personalized medical care from an integral perspective. To this end, the syllabus will include the application of genomic-assisted analysis, deepening the interpretations of generic data to design specific therapeutic strategies. Likewise, the syllabus will offer students pioneering techniques to extract information from users that are currently implemented in the health sector. At the same time, they will master fundamental concepts of data mining and retrieval systems. Ethical aspects such as informed consent will also be included in the study plan.





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*A complete syllabus that incorporates all the knowledge you need to take a step towards the highest medical quality"*

## Module 1. Health Personalization through AI

- 1.1. AI Applications in Genomics for Personalized Medicine
  - 1.1.1. Development of AI Algorithms for the Analysis of Genetic Sequences and their Relationship to Diseases
  - 1.1.2. Use of AI in the Identification of Genetic Markers for Personalized Treatments
  - 1.1.3. Implementation of AI for the Rapid and Accurate Interpretation of Genomic Data
  - 1.1.4. AI Tools in Correlating Genotypes with Drug Responses
- 1.2. AI in Pharmacogenomics and Drug Design
  - 1.2.1. Development of AI Models for Predicting Drug Efficacy and Safety
  - 1.2.2. Use of AI in the Identification of Therapeutic Targets and Drug Design
  - 1.2.3. Application of AI in the Analysis of Gene-Drug Interactions for Personalization of Treatments
  - 1.2.4. Implementation of AI Algorithms to Accelerate New Drug Discovery
- 1.3. Personalized Monitoring with Smart Devices and AI
  - 1.3.1. Development of Wearables with AI for Continuous Monitoring of Health Indicators
  - 1.3.2. Use of AI in the Interpretation of Data Collected by Smart Devices
  - 1.3.3. Implementation of AI-based Early Warning Systems for Health Conditions
  - 1.3.4. AI Tools for Personalization of Lifestyle and Health Recommendations
- 1.4. Clinical Decision Support Systems with AI
  - 1.4.1. Implementation of AI to Assist Clinicians in Clinical Decision Support Systems
  - 1.4.2. Development of AI Systems that Provide Clinical Data-Based Recommendations
  - 1.4.3. Use of AI in Risk/Benefit Assessment of Different Therapeutic Options
  - 1.4.4. AI tools for the Integration and Analysis of Real-Time Healthcare Data
- 1.5. Trends in Health Personalization with AI
  - 1.5.1. Analysis of the Latest Trends in AI for Healthcare Personalization
  - 1.5.2. Use of AI in the Development of Preventive and Predictive Approaches in Health Care
  - 1.5.3. Implementation of AI in the Adaptation of Health Plans to Individual Needs
  - 1.5.4. Exploration of New AI Technologies in the Field of Personalized Health Care



- 1.6. Advances in AI-assisted Surgical Robotics
  - 1.6.1. Development of AI-assisted Surgical Robots for Precise and Minimally Invasive Procedures
  - 1.6.2. Use of AI to Improve Accuracy and Safety in Robotic-Assisted Surgeries
  - 1.6.3. Implementation of AI Systems for Surgical Planning and Operative Simulation
  - 1.6.4. Advances in the Integration of Tactile and Visual Feedback in Surgical Robotics with AI
- 1.7. Development of Predictive Models for Personalized Clinical Practice
  - 1.7.1. Use of AI to Create Predictive Models of Disease Based on Individual Data
  - 1.7.2. Implementation of AI in the Prediction of Treatment Responses
  - 1.7.3. Development of AI Tools for Health Risk Anticipation
  - 1.7.4. Application of Predictive Models in the Planning of Preventive Interventions
- 1.8. AI in Pain Management and Personalized Pain Treatment
  - 1.8.1. Development of AI Systems for Personalized Pain Assessment and Management
  - 1.8.2. Use of AI in the Identification of Pain Patterns and Treatment Responses
  - 1.8.3. Implementation of AI Tools in the Personalization of Pain Therapies
  - 1.8.4. Application of AI in Monitoring and Adjustment of Pain Treatment Plans
- 1.9. Patient Autonomy and Active Participation in Customization
  - 1.9.1. Promotion of Patient Autonomy through AI Tools for Health Management
  - 1.9.2. Development of AI Systems that Empower Patients in Decision Making
  - 1.9.3. Use of AI to Provide Personalized Information and Education to Patients
  - 1.9.4. AI Tools that Facilitate Active Patient Involvement in Treatment
- 1.10. Integration of AI in Electronic Medical Records
  - 1.10.1. Implementation of AI for the Efficient Analysis and Management of Electronic Medical Records
  - 1.10.2. Development of AI Tools for Extraction of Clinical Insights from Electronic Records
  - 1.10.3. Use of AI to Improve the Accuracy and Accessibility of Medical Record Data
  - 1.10.4. AI Application for Correlation of Medical Record Data with Treatment Plans

## Module 2. Analysis of *Big Data* in the Healthcare Sector with AI

- 2.1. Big Data Fundamentals in Health
  - 2.1.1. The Explosion of Data in Healthcare
  - 2.1.2. Concept of Big Data and Main Tools
  - 2.1.3. Applications of Big Data in Healthcare
- 2.2. Text Processing and Analysis of Health Data
  - 2.2.1. Concepts of Natural Language Processing
  - 2.2.2. Embedding Techniques
  - 2.2.3. Application of Natural Language Processing in Health Care
- 2.3. Advanced Methods for Data Retrieval in Health Care
  - 2.3.1. Exploration of Innovative Techniques for Efficient Data Retrieval in Health Care
  - 2.3.2. Development of Advanced Strategies for Extracting and Organizing Information in Health Care Settings
  - 2.3.3. Implementation of Adaptive and Personalized Data Retrieval Methods for Diverse Clinical Contexts
- 2.4. Quality Assessment in Health Data Analysis
  - 2.4.1. Development of Indicators for Rigorous Assessment of Data Quality in Health Care Settings
  - 2.4.2. Implementation of Tools and Protocols for Quality Assurance of Data Used in Clinical Analyses
  - 2.4.3. Continuous Assessment of the Accuracy and Reliability of Results in Health Data Analysis Projects
- 2.5. Data Mining and Automatic Learning in Healthcare
  - 2.5.1. Main Methodologies for Data Mining
  - 2.5.2. Health Data Integration
  - 2.5.3. Detection of Patterns and Anomalies in Health Data
- 2.6. Innovative Areas of Big Data and AI in Healthcare
  - 2.6.1. Exploring New Frontiers in the Application of Big Data and AI to Transform the Healthcare Sector
  - 2.6.2. Identifying Innovative Opportunities for the Integration of Big Data and AI Technologies in Medical Practices
  - 2.6.3. Development of Cutting-edge Approaches to Maximize the Potential of Big Data and AI in Healthcare

- 2.7. Medical Data Collection and Preprocessing
  - 2.7.1. Development of Efficient Methodologies for Medical Data Collection in Clinical and Research Settings
  - 2.7.2. Implementation of Advanced Preprocessing Techniques to Optimize Medical Data Quality and Utility
  - 2.7.3. Design of Collection and Preprocessing Strategies that Guarantee the Confidentiality and Privacy of Medical Information
- 2.8. Data Visualization and Health Communication
  - 2.8.1. Design of Innovative Visualization Tools in Health Care
  - 2.8.2. Creative Health Communication Strategies
  - 2.8.3. Integration of Interactive Technologies in Health
- 2.9. Data Security and Governance in the Health Sector
  - 2.9.1. Development of Comprehensive Data Security Strategies to Protect Confidentiality and Privacy in the Health Sector
  - 2.9.2. Implementation of Effective Governance Frameworks to Ensure Responsible and Ethical Data Management in Medical Settings
  - 2.9.3. Design of Policies and Procedures to Ensure the Integrity and Availability of Medical Data, Addressing Health Sector-Specific Challenges
- 2.10. Practical Applications of Big Data in Healthcare
  - 2.10.1. Development of Specialized Solutions for Managing and Analyzing Large Data Sets in Healthcare Environments
  - 2.10.2. Use of Practical Tools Based on Big Data to Support Clinical Decision Making
  - 2.10.3. Application of Innovative Big Data Approaches to Address Specific Challenges within the Healthcare Sector

### Module 3. Ethics and Regulation in Medical AI

- 3.1. Ethical Principles in the Use of AI in Medicine
  - 3.1.1. Analysis and Adoption of Ethical Principles in the Development and Use of Medical AI Systems
  - 3.1.2. Integration of Ethical Values in AI-assisted Decision Making in Medical Contexts
  - 3.1.3. Establishment of Ethical Guidelines to Ensure Responsible Use of Artificial Intelligence in Medicine
- 3.2. Data Privacy and Consent in Medical Contexts
  - 3.2.1. Development of Privacy Policies to Protect Sensitive Data in Medical AI Applications
  - 3.2.2. Ensuring Informed Consent in the Collection and Use of Personal Data in Medical Settings
  - 3.2.3. Implementing Security Measures to Safeguard Patient Privacy in Medical AI Environments
- 3.3. Ethics in the Research and Development of Medical AI Systems
  - 3.3.1. Ethical Evaluation of Research Protocols in the Development of AI Health Systems
  - 3.3.2. Ensuring Transparency and Ethical Rigor in the Development and Validation Phases of Medical AI Systems
  - 3.3.3. Ethical Considerations in the Publication and Sharing of Results in the Field of Medical AI
- 3.4. Social Impact and Accountability in AI for Health
  - 3.4.1. Analysis of the Social Impact of AI in Health Care Delivery
  - 3.4.2. Development of Strategies to Mitigate Risks and Ethical Responsibility in AI Applications in Medicine
  - 3.4.3. Continuous Evaluation of the Social Impact and Adaptation of AI Systems to Make a Positive Contribution to Public Health
- 3.5. Sustainable Development of AI in the Health Sector
  - 3.5.1. Integration of Sustainable Practices in the Development and Maintenance of AI Systems in Health
  - 3.5.2. Assessment of the Environmental and Economic Impact of AI Technologies in the Health Sector
  - 3.5.3. Development of Sustainable Business Models to Ensure Continuity and Improvement of AI Solutions in Healthcare
- 3.6. Data Governance and International Regulatory Frameworks in Medical AI
  - 3.6.1. Development of Governance Frameworks for Ethical and Efficient Data Management in Medical AI Applications
  - 3.6.2. Adaptation to International Standards and Regulations to Ensure Ethical and Legal Compliance
  - 3.6.3. Active Participation in International Initiatives to Establish Ethical Standards in the Development of Medical AI Systems
- 3.7. Economic Aspects of AI in the Healthcare Field
  - 3.7.1. Analysis of Economic and Cost-Benefit Implications in the Implementation of AI Systems in Healthcare
  - 3.7.2. Development of Business and Financing Models to Facilitate the Adoption of AI Technologies in the Healthcare Sector
  - 3.7.3. Assessment of Economic Efficiency and Equity in Access to AI-driven Health Services



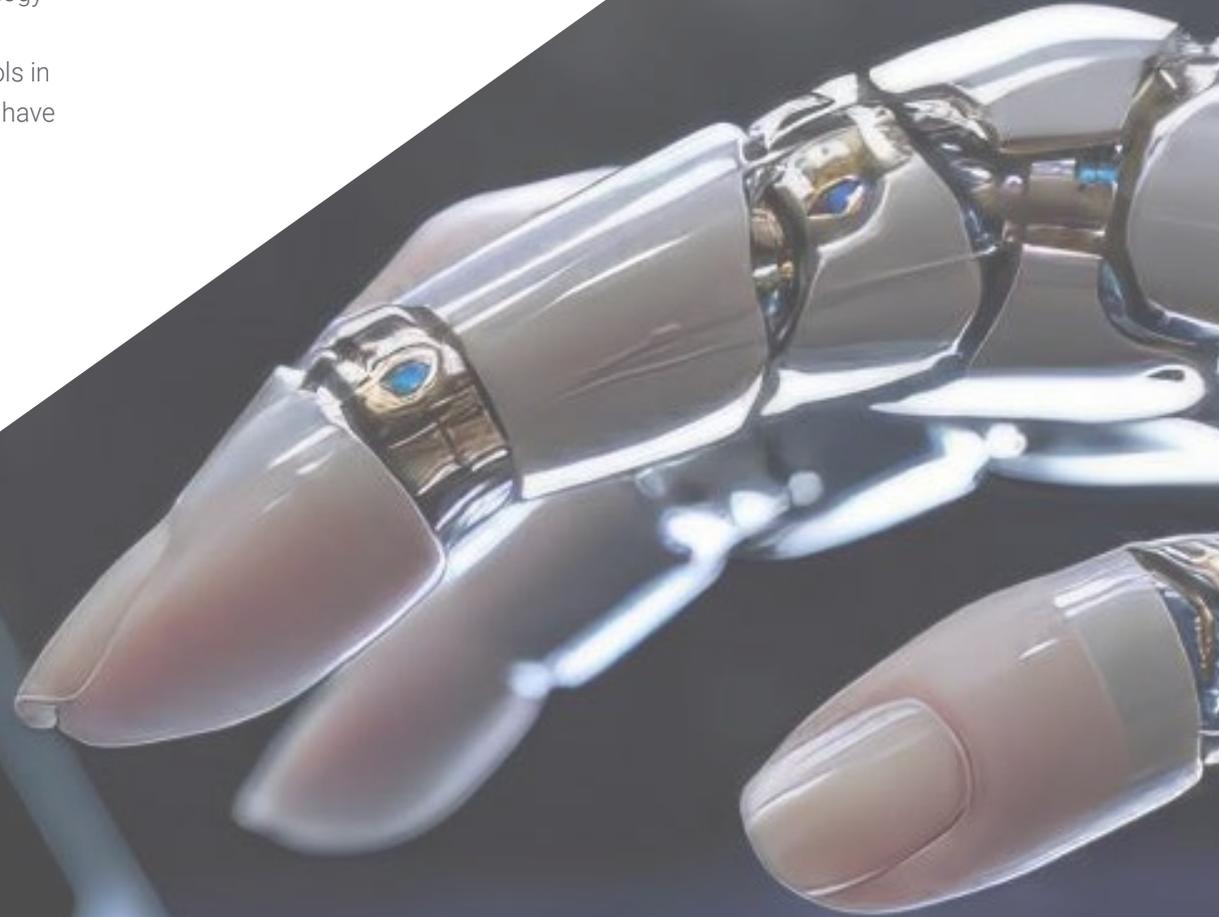
- 3.8. Human-centered Design of Medical AI Systems
  - 3.8.1. Integration of Human-Centered Design Principles to Improve Usability and Acceptability of Medical AI Systems
  - 3.8.2. Involvement of Healthcare Professionals and Patients in the Design Process to Ensure Relevance and Effectiveness of Solutions
  - 3.8.3. Continuous Evaluation of User Experience and Feedback to Optimize Interaction with AI Systems in Medical Settings
- 3.9. Fairness and Transparency in Medical Machine Learning
  - 3.9.1. Development of Medical Machine Learning Models that Promote Fairness and Transparency
  - 3.9.2. Implementation of Practices to Mitigate Bias and Ensure Fairness in the Application of AI Algorithms in Healthcare
  - 3.9.3. Continued Assessment of Fairness and Transparency in the Development and Deployment of Machine Learning Solutions in Medicine
- 3.10. Safety and Policy in the Deployment of AI in Medicine
  - 3.10.1. Development of Security Policies to Protect Data Integrity and Confidentiality in Medical AI Applications
  - 3.10.2. Implementation of Safety Measures in the Deployment of AI Systems to Prevent Risks and Ensure Patient Safety
  - 3.10.3. Continuous Evaluation of Safety Policies to Adapt to Technological Advances and New Challenges in the Deployment of AI in Medicine

05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning**.

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





“

*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

## Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

“

*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

### A learning method that is different and innovative

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

“*Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the course, students will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

## Relearning Methodology

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

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.



In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

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

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



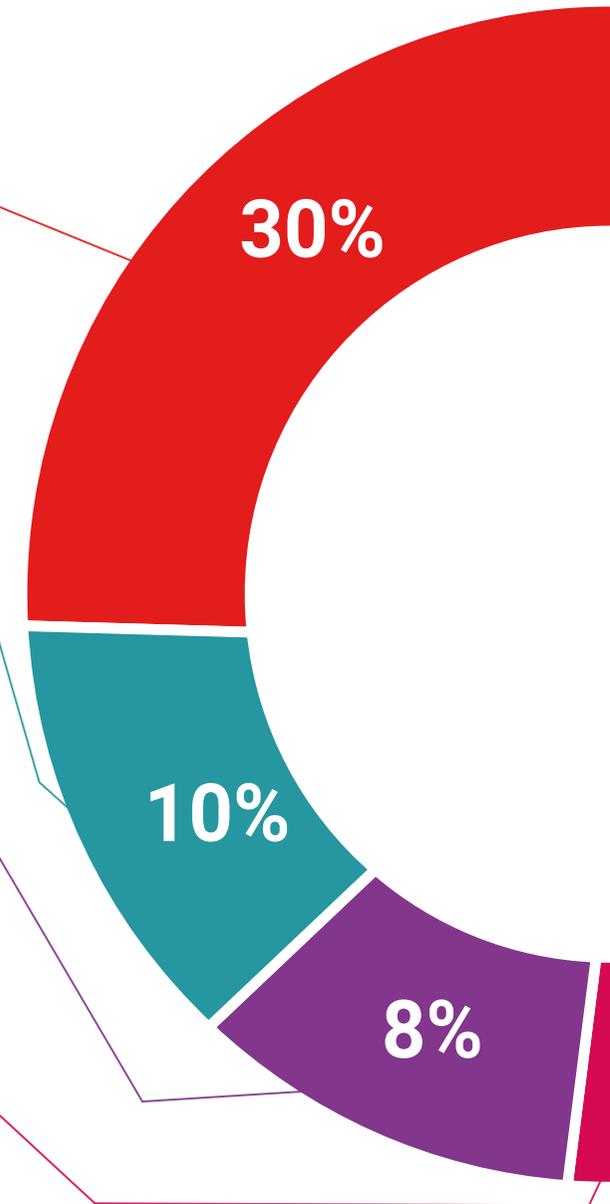
### Practising Skills and Abilities

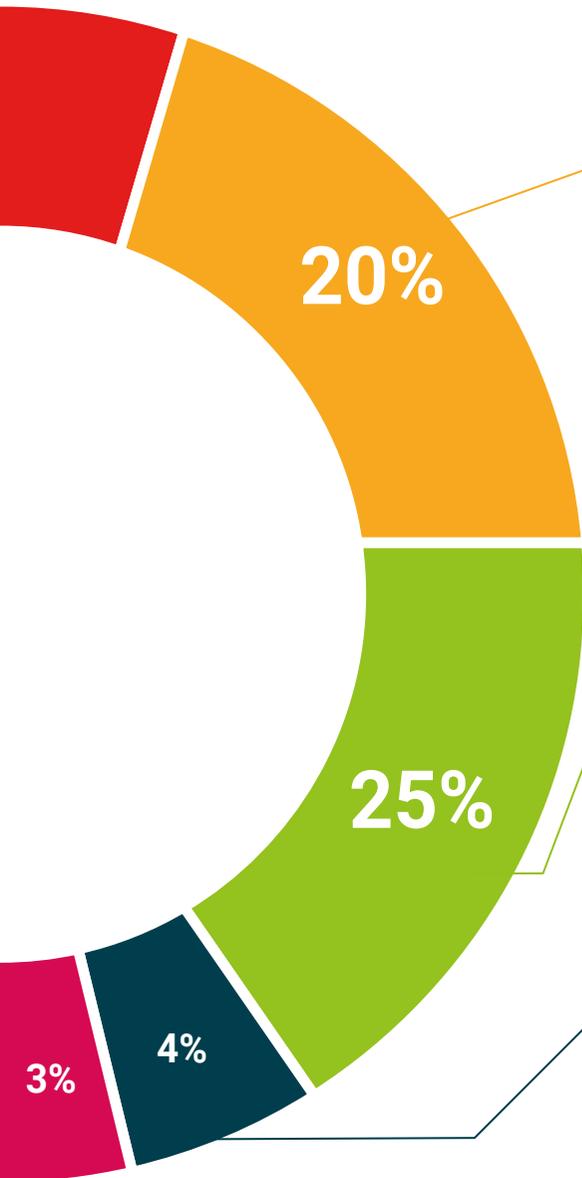
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





**Case Studies**

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



**Interactive Summaries**

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

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



**Testing & Retesting**

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



06

# Certificate

The Postgraduate Diploma in Clinical Data Analysis and Personalization of Medical Treatments using Artificial Intelligence guarantees students, in addition to the most rigorous and up-to-date education, access to a qualification issued by TECH Global University



“

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

This program will allow you to obtain your **Postgraduate Diploma in Clinical Data Analysis and Personalization of Medical Treatments using 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.

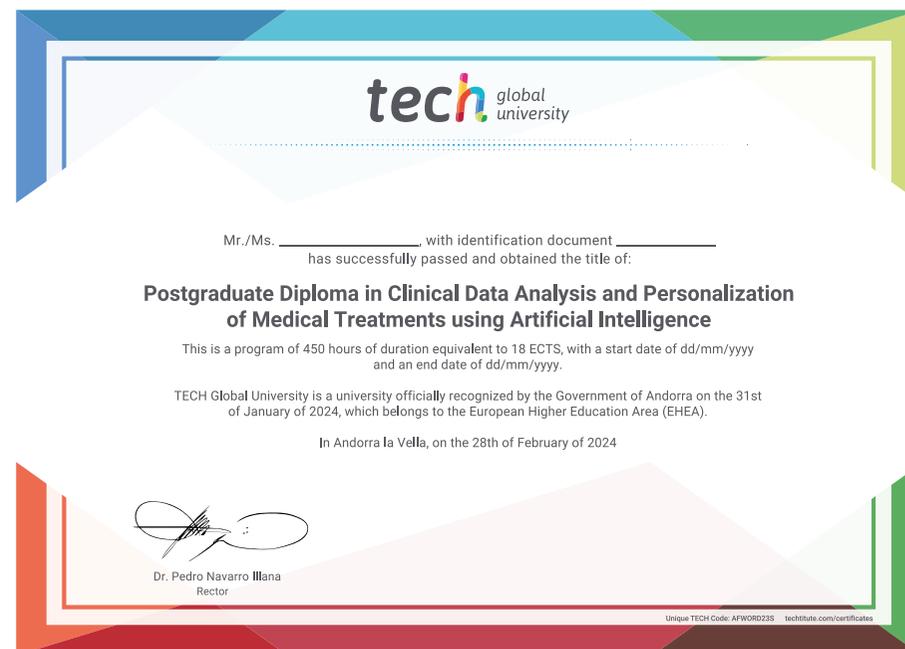
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Clinical Data Analysis and Personalization of Medical Treatments using Artificial Intelligence**

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

online training

development language

virtual classroom



## Postgraduate Diploma Clinical Data Analysis and Personalization of Medical Treatments using Artificial Intelligence

- » Modality: online
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