

Postgraduate Diploma

Artificial Intelligence and Big Data Technologies
for Medical Imaging Processing



Postgraduate Diploma Artificial Intelligence and Big Data Technologies for Medical Imaging Processing

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

Website: www.techtute.com/us/medicine/postgraduate-diploma/postgraduate-diploma-artificial-intelligence-big-data-technologies-medical-imaging-processing

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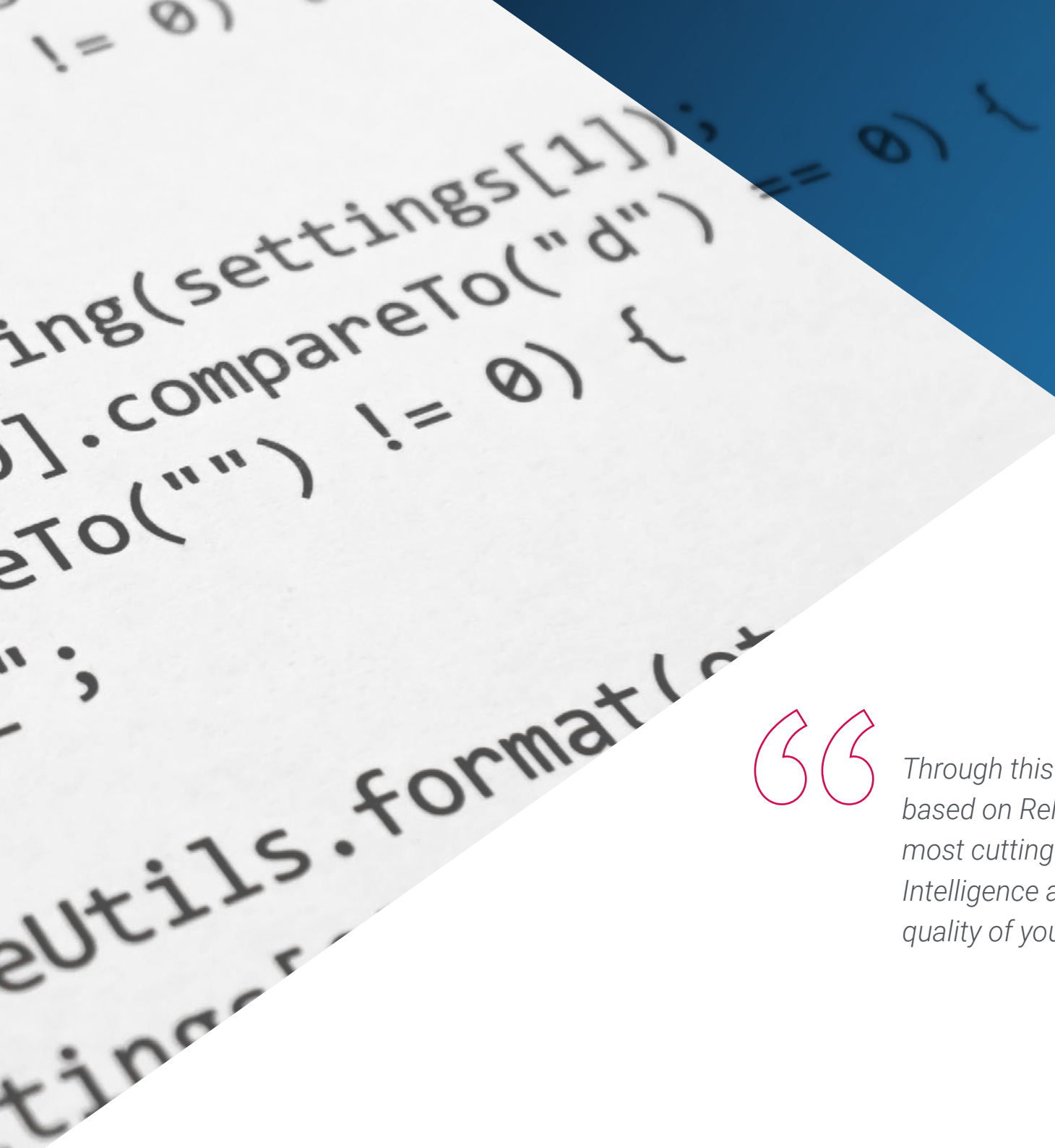
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01

Introduction

The growing volume of clinical data generated daily has created an urgent need to implement emerging technologies that enable more efficient processing. In this situation, the combination of Intelligence and Big Data is emerging as a revolutionary solution to analyze large volumes of information. Among its main advantages is its ability to identify complex patterns in a variety of medical images, making it possible to detect multiple signs of chronic pathologies. However, the integration of these tools into daily practice can be a challenge due to the lack of standardization of algorithms. To facilitate this task, TECH launches a revolutionary online university program focused on the most effective strategies to successfully implement these tools.





Through this Postgraduate Diploma, based on Relearning, you will handle the most cutting-edge techniques of Artificial Intelligence and Big Data to optimize the quality of your clinical diagnoses"

A new study prepared by the World Health Organization estimates that 70% of diagnostic errors in Medical Imaging can be reduced by using Artificial Intelligence. An example of this is that the analysis of imaging tests by Magnetic Resonance Imaging has enabled the early detection of Neurodegenerative Pathologies such as Alzheimer's disease by 30% compared to traditional methods. Faced with this, physicians need to stay at the forefront of advances in this field in order to make more informed clinical decisions and personalize therapies to optimize the health of patients significantly.

In this scenario, TECH presents an innovative program in Artificial Intelligence and Big Data Technologies for Medical Image Processing. The academic itinerary will delve into issues ranging from the use of Deep Learning or Convolutional Neural Networks to the most sophisticated Machine Learning techniques. In this way, graduates will develop advanced clinical skills that will enable them to make more accurate diagnoses in early stages. Likewise, the syllabus will offer various modeling methods to predict both the onset and progression of diseases, which will help professionals to carry out preventive interventions. In addition, the didactic materials will delve into the ethical and legal considerations of the use of Artificial Intelligence in the healthcare field.

On the other hand, to consolidate all these contents, TECH relies on its disruptive Relearning system. This teaching method is based on the repetition of key contents, to guarantee a progressive and natural updating of knowledge. In addition, the only thing that graduates will need is a device with Internet access to access the study materials remotely, at the time or place of their choice. On the other hand, in the Virtual Campus they will find a variety of multimedia resources such as case studies, interactive summaries or explanatory videos.

This **Postgraduate Diploma in Artificial Intelligence and Big Data Technologies for Medical Imaging Processing** contains the most complete and up-to-date scientific program on the market. The most important features include:

- ♦ Development of practical cases presented by experts in Artificial Intelligence
- ♦ The graphic, schematic and eminently practical contents with which it is conceived gather scientific and practical information on those disciplines that are indispensable 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 enjoy state-of-the-art multimedia resources such as specialized readings supported by the latest scientific findings in the field of Medical Image Processing”

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TECH provides you with a 100% online methodology, based on free access to the didactic contents, which you will be able to carry out while developing your full-time professional work”

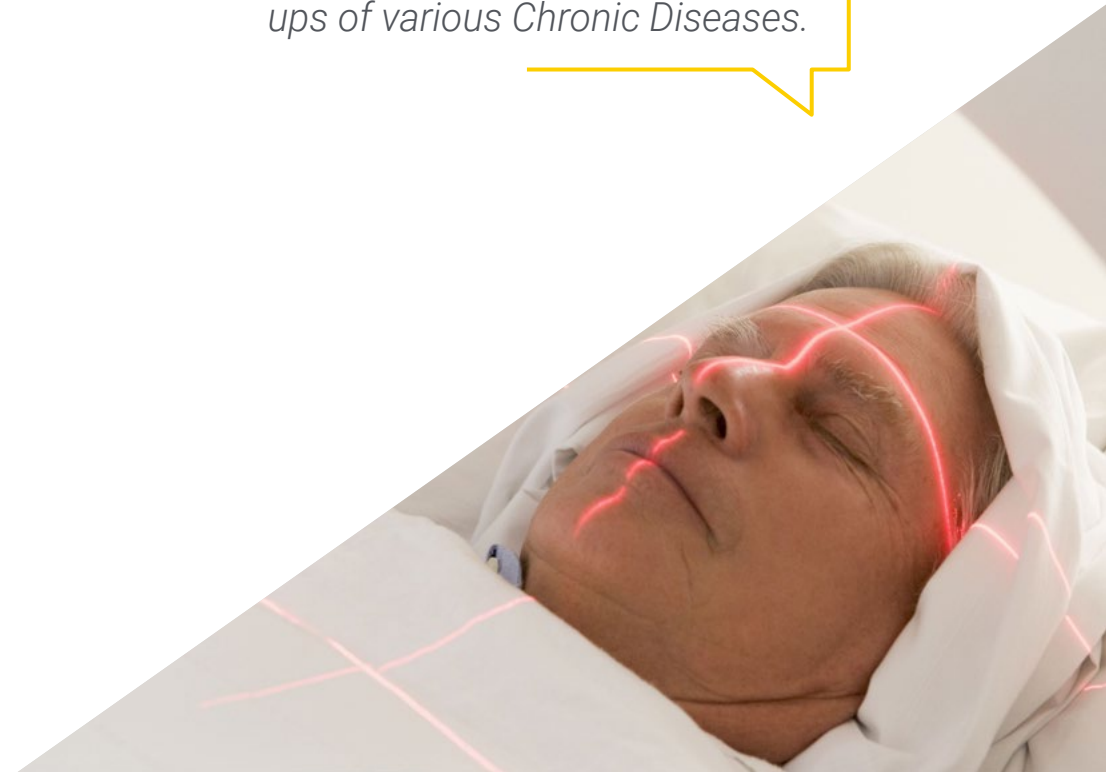
The program's teaching staff includes professionals from the field who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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 course. For this purpose, students will be assisted by an innovative interactive video system created by renowned and experienced experts.

Do you want to implement the most innovative Big Data techniques in your daily clinical practice? With this university program you will achieve it.

You will delve into predictive modeling with IBM Watson Oncology, which will allow you to perform exhaustive follow-ups of various Chronic Diseases.



02 Objectives

Thanks to this Postgraduate Diploma, specialists will acquire a comprehensive knowledge of the fundamentals of Artificial Intelligence applied to Medical Image Processing. Likewise, they will obtain advanced clinical competences to skillfully handle innovative tools such as Deep Learning, Generative Networks or Natural Language Processing. This will allow professionals to use the most cutting-edge algorithms to identify complex patterns in imaging tests and detect a wide range of acute pathologies such as Stroke. Therefore, professionals will be able to make more efficient diagnoses and personalize treatments to improve the overall well-being of patients.



“

You will be able to design, specialize and validate AI-based predictive models to predict patient response to a variety of treatments”



General Objectives

- ◆ Understand the theoretical foundations of Artificial Intelligence
- ◆ Study the different types of data and understand the data life cycle
- ◆ 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
- ◆ Explore bio-inspired computing and its relevance in the development of intelligent systems
- ◆ Develop skills to use and apply advanced Artificial Intelligence tools in the interpretation and analysis of medical images, improving diagnostic accuracy
- ◆ Implement Artificial Intelligence solutions that allow the automation of processes and the personalization of diagnostics
- ◆ Apply Data Mining and Predictive Analytics techniques to make evidence-based clinical decisions
- ◆ Acquire research skills that allow experts to contribute to the advancement of Artificial Intelligence in Medical Imaging





Specific Objectives

Module 1. Artificial Intelligence Innovations in Diagnostic Imaging

- ◆ Master tools such as IBM Watson Imaging and NVIDIA Clara to automatically interpret clinical tests
- ◆ Gain competencies to perform clinical experiments and results analysis using Artificial Intelligence, with an approach based on improving diagnostic accuracy

Module 2. Big Data and Predictive Analytics in Medical Imaging

- ◆ Manage large volumes of data using Data Mining techniques and Machine Learning algorithms
- ◆ Create clinical prognostic tools based on Big Data analysis in order to optimize clinical decisions

Module 3. Ethical and Legal Aspects of Artificial Intelligence in Diagnostic Imaging

- ◆ Have a holistic understanding of the regulatory and deontological principles governing the use of Artificial Intelligence in the field of Health, including aspects such as informed consent
- ◆ Be able to audit Artificial Intelligence models used in clinical practice, ensuring their transparency and accountability in medical decision making

03

Course Management

TECH's priority is to make available to everyone the most comprehensive and renewed programs in the educational landscape, which is why it carries out a rigorous process to establish its teaching staff. As a result, this Postgraduate Diploma will be taught by the best experts in the field of Artificial Intelligence and Big Data Technologies for Medical Imaging Processing. Therefore, they have developed teaching materials that stand out both for their high quality and for adapting to the requirements of the current labor market. In this way, graduates will have access to an experience that will allow them to optimize their clinical practice considerably.



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An experienced teaching team, highly specialized in Artificial Intelligence, will guide you throughout the university program and will provide you with personalized advice”

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
- ♦ 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
- ♦ Máster 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



Professors

Mr. Popescu Radu, Daniel Vasile

- ◆ Independent Specialist in Pharmacology, Nutrition and Dietetics
- ◆ Freelance Producer of Teaching and Scientific Content
- ◆ Nutritionist and Community Dietitian
- ◆ Community Pharmacist
- ◆ Researcher
- ◆ Master's Degree in Nutrition and Health at the Open University of Catalonia
- ◆ Master's Degree in Psychopharmacology from the University of Valencia
- ◆ Pharmacist from the Complutense University of Madrid
- ◆ Nutritionist-Dietitian by the European University Miguel de Cervantes

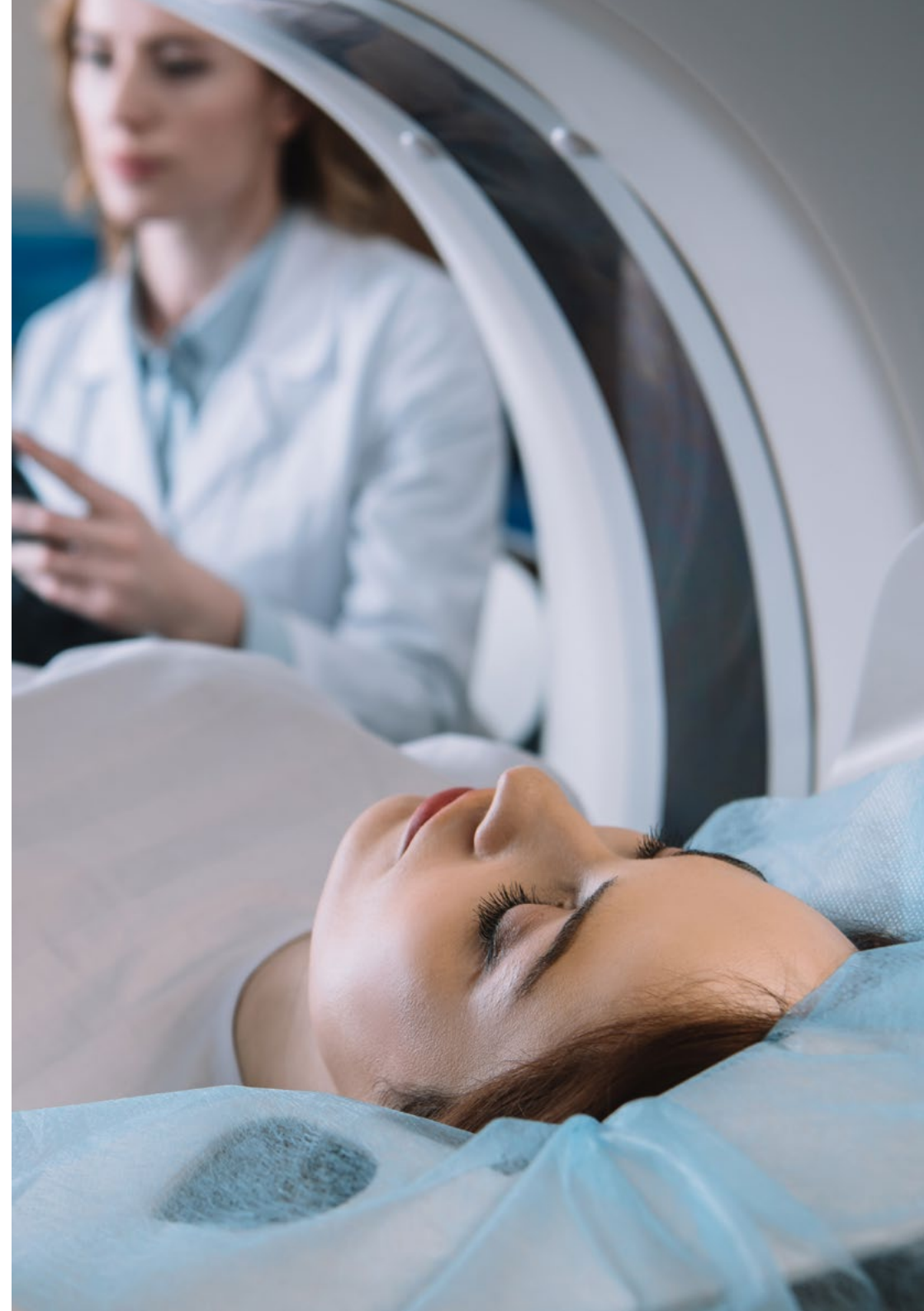

```
deactivate(true);  
return; // this is a modified line  
  
keyCode == 13) {  
  stopImmediatePropagation();  
  event.preventDefault();  
  .search();  
  .deactivate();  
  return;  
  
DOWN  
keyCode == 38 || e.keyCode == 40) {  
  event.preventDefault();  
  stopImmediatePropagation();  
  e.keyCode == 38) { // up  
    show previous search query  
    (hist.currentIndex == hist.hist.length - 1) {  
      hist.currentIndex = 0;  
      hist.previousQuery = hist.currentQuery;  
      hist.currentQuery = e.target.value;  
      // skip previous search  
      if (hist.previousQuery == hist.currentQuery) {  
        hist.currentIndex = hist.currentIndex + 1;  
      }  
    }  
  }  
}
```

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You will master the most sophisticated Big Data techniques to identify complex patterns in Medical Images and increase the accuracy of clinical diagnoses”

Module 1. Artificial Intelligence Innovations in Diagnostic Imaging

- 1.1. Artificial Intelligence Technologies and Tools in Diagnostic Imaging with IBM Watson Imaging Clinical Review
 - 1.1.1. Leading Software Platforms for Medical Image Analysis
 - 1.1.2. Radiology-Specific Deep Learning Tools
 - 1.1.3. Innovations in Hardware to Accelerate Image Processing
 - 1.1.4. Integration of Artificial Intelligence Systems in Existing Hospital Infrastructures
- 1.2. Statistical Methods and Algorithms for Medical Image Interpretation with DeepMind AI for Breast Cancer Analysis
 - 1.2.1. Image Segmentation Algorithms
 - 1.2.2. Classification and Detection Techniques in Medical Imaging
 - 1.2.3. Use of Convolutional Neural Networks in Radiology
 - 1.2.4. Noise Reduction and Image Quality Improvement Methods
- 1.3. Design of Experiments and Analysis of Results in Diagnostic Imaging with Google Cloud Healthcare API
 - 1.3.1. Design of Validation Protocols for Artificial Intelligence Algorithms
 - 1.3.2. Statistical Methods for Comparing the Performance of Artificial Intelligence and Radiologists
 - 1.3.3. Setting Up Multicenter Studies for Artificial Intelligence Testing
 - 1.3.4. Interpretation and Presentation of Performance Test Results
- 1.4. Detection of Subtle Patterns in Low-Resolution Images
 - 1.4.1. Artificial Intelligence for Early Diagnosis of Neurodegenerative Diseases
 - 1.4.2. Artificial Intelligence Applications in Interventional Cardiology
 - 1.4.3. Use of Artificial Intelligence for the Optimization of Imaging Protocols
- 1.5. Biomedical Image Analysis and Processing
 - 1.5.1. Pre-Processing Techniques to Improve Automatic Interpretation
 - 1.5.2. Texture and Pattern Analysis in Histological Images
 - 1.5.3. Extraction of Clinical Features from Ultrasound Images
 - 1.5.4. Methods for Longitudinal Analysis of Images in Clinical Studies



- 1.6. Advanced Data Visualization in Diagnostic Imaging with OsiriX MD
 - 1.6.1. Development of Graphical Interfaces for 3D Image Exploration
 - 1.6.2. Tools for Visualization of Temporal Changes in Medical Images
 - 1.6.3. Augmented Reality Techniques for the Teaching of Anatomy
 - 1.6.4. Real-Time Visualization Systems for Surgical Procedures
- 1.7. Natural Language Processing in Medical Image Documentation and Reporting with Nuance PowerScribe 360
 - 1.7.1. Automatic Generation of Radiological Reports
 - 1.7.2. Extraction of Relevant Information from Electronic Medical Records
 - 1.7.3. Semantic Analysis for the Correlation of Imaging and Clinical Findings
 - 1.7.4. Image Search and Retrieval Tools Based on Textual Descriptions
- 1.8. Integration and Processing of Heterogeneous Data in Medical Imaging
 - 1.8.1. Fusion of Imaging Modalities for Complete Diagnostics
 - 1.8.2. Integration of Laboratory and Genetic Data in the Image Analysis
 - 1.8.3. Systems for Handling Large Volumes of Imaging Data
 - 1.8.4. Strategies for Normalization of Datasets from Multiple Sources
- 1.9. Applications of Neural Networks in Medical Image Interpretation with Zebra Medical Vision
 - 1.9.1. Use of Generative Networks for the Creation of Synthetic Medical Images
 - 1.9.2. Neural Networks for Automatic Tumor Classification
 - 1.9.3. Deep Learning for the Analysis of Time Series in Functional Imaging
 - 1.9.4. Fitting of Pre-Trained Models on Specific Medical Image Datasets
- 1.10. Predictive Modeling and its Impact on Diagnostic Imaging with IBM Watson Oncology
 - 1.10.1. Predictive Models for Risk Assessment in Oncology Patients
 - 1.10.2. Predictive Tools for Chronic Disease Follow-Up
 - 1.10.3. Survival Analysis Using Medical Imaging Data
 - 1.10.4. Prediction of Disease Progression using Machine Learning Techniques

Module 2. Big Data and Predictive Analytics in Medical Imaging

- 2.1. Big Data in Diagnostic Imaging: Concepts and Tools with GE Healthcare Edison
 - 2.1.1. Fundamentals of Big Data applied to Imaging
 - 2.1.2. Technological Tools and Platforms for Handling Large Volumes of Imaging Data
 - 2.1.3. Challenges in the Integration and Analysis of Big Data in Imaging
 - 2.1.4. Use Cases of Big Data in Diagnostic Imaging
- 2.2. Data Mining in Biomedical Image Registries with IBM Watson Imaging
 - 2.2.1. Advanced Data Mining Techniques to Identify Patterns in Medical Images
 - 2.2.2. Strategies for Extracting Relevant Features in Large Image Databases
 - 2.2.3. Applications of Clustering and Classification Techniques in Image Registries
 - 2.2.4. Impact of Data Mining on Improving Diagnosis and Treatment
- 2.3. Machine Learning Algorithms in Image Analysis with Google DeepMind Health
 - 2.3.1. Development of Supervised and Unsupervised Algorithms for Medical Imaging
 - 2.3.2. Innovations in Machine Learning Techniques for Recognition of Disease Patterns
 - 2.3.3. Applications of Deep Learning in Image Segmentation and Classification
 - 2.3.4. Evaluation of the Efficacy and Accuracy of Machine Learning Algorithms in Clinical Studies
- 2.4. Predictive Analytics Techniques Applied to Diagnostic Imaging with Predictive Oncology
 - 2.4.1. Predictive Models for the Early Identification of Diseases from Images
 - 2.4.2. Use of Predictive Analytics for Monitoring and Treatment Evaluation
 - 2.4.3. Integration of Clinical and Imaging Data to Enrich Predictive Models
 - 2.4.4. Challenges in the Implementation of Predictive Techniques in Clinical Practice
- 2.5. Image-Based Artificial Intelligence Models for Epidemiology with BlueDot
 - 2.5.1. Application of Artificial Intelligence in the Analysis of Epidemic Outbreaks Using Images
 - 2.5.2. Models of Disease Spread Visualized by Imaging Techniques
 - 2.5.3. Correlation Between Epidemiological Data and Imaging Findings
 - 2.5.4. Contribution of Artificial Intelligence to the Study and Control of Pandemics

- 2.6. Analysis of Biological Networks and Disease Patterns from Images
 - 2.6.1. Application of Network Theory in the Analysis of Images to Understand Pathologies
 - 2.6.2. Computational Models to Simulate Biological Networks Visible in Images
 - 2.6.3. Integration of Image Analysis and Molecular Data for Mapping Diseases
 - 2.6.4. Impact of these Analyses on the Development of Personal Therapies
- 2.7. Development of Image-Based Tools for Clinical Prognosis
 - 2.7.1. Artificial Intelligence Tools for the Prediction of Clinical Course from Diagnostic Images
 - 2.7.2. Advances in the Generation of Automated Prognostic Reports
 - 2.7.3. Integration of Prognostic Models in Clinical Systems
 - 2.7.4. Validation and Clinical Acceptance of AI-Based Prognostic Tools
- 2.8. Advanced Visualization and Communication of Complex Data with Tableau
 - 2.8.1. Visualization Techniques for the Multidimensional Representation of Image Data
 - 2.8.2. Interactive Tools for the Exploration of Large Image Datasets
 - 2.8.3. Strategies for Effective Communication of Complex Findings Through Visualizations
 - 2.8.4. Impact of Advanced Visualization on Medical Education and Decision Making
- 2.9. Data Security and Challenges in Big Data Management
 - 2.9.1. Security Measures to Protect Large Volumes of Medical Imaging Data
 - 2.9.2. Challenges in Privacy and Ethics of Large-Scale Image Data Management
 - 2.9.3. Technological Solutions for the Secure Management of Healthcare Big Data
 - 2.9.4. Case Studies on Security Breaches and how they Were Addressed
- 2.10. Practical Applications and Case Studies on Biomedical Big Data
 - 2.10.1. Examples of Successful Applications of Big Data in the Diagnosis and Treatment of Diseases
 - 2.10.2. Case Studies on the Integration of Big Data
 - 2.10.3. Lessons Learned from Big Data Projects in the Biomedical Field
 - 2.10.4. Future Directions and Potentials of Big Data in Medicine

Module 3. Ethical and Legal Aspects of Artificial Intelligence in Diagnostic Imaging

- 3.1. Ethics in the Application of Artificial Intelligence in Diagnostic Imaging with Ethics and Algorithms Toolkit
 - 3.1.1. Fundamental Ethical Principles in the Use of Artificial Intelligence for Diagnosis
 - 3.1.2. Algorithmic Bias Management and its Impact on Diagnostic Fairness
 - 3.1.3. Informed Consent in the Era of Diagnostic Artificial Intelligence
 - 3.1.4. Ethical Challenges in the International Implementation of Artificial Intelligence Technologies
- 3.2. Legal and Regulatory Considerations in Artificial Intelligence Applied to Medical Imaging with Compliance.ai
 - 3.2.1. Current Regulatory Framework for Artificial Intelligence in Diagnostic Imaging
 - 3.2.2. Compliance with Privacy and Data Protection Regulations
 - 3.2.3. Validation and Certification Requirements for Artificial Intelligence Algorithms in Healthcare
 - 3.2.4. Legal Liability in Case of Diagnostic Errors due to Artificial Intelligence
- 3.3. Informed Consent and Ethical Aspects in the Use of Clinical Data
 - 3.3.1. Review of Informed Consent Processes Adapted to Artificial Intelligence
 - 3.3.2. Patient Education on the Use of Artificial Intelligence in their Medical Care
 - 3.3.3. Transparency in the Use of Clinical Data for Artificial Intelligence Training
 - 3.3.4. Respect for Patient Autonomy in Decisions Based on Artificial Intelligence
- 3.4. Artificial Intelligence and Accountability in Clinical Research
 - 3.4.1. Assignment of Responsibilities in the Use of Artificial Intelligence for Diagnosis
 - 3.4.2. Implications of Artificial Intelligence Errors in Clinical Practice
 - 3.4.3. Insurance and Coverage for Risks Associated with the Use of Artificial Intelligence
 - 3.4.4. Strategies for the Management of Incidents Related to Artificial Intelligence

- 3.5. Impact of Artificial Intelligence on Equity and Access to Health Care with AI for Good
 - 3.5.1. Assessment of the Impact of Artificial Intelligence on the Distribution of Medical Services
 - 3.5.2. Strategies to Ensure Equitable Access to AI Artificial Intelligence Technology
 - 3.5.3. Artificial Intelligence as a Tool to Reduce Health Disparities
 - 3.5.4. Case Studies on the Implementation of Artificial Intelligence in Resource-Limited Settings
- 3.6. Privacy and Data Protection in Research Projects using Duality SecurePlus
 - 3.6.1. Strategies for Ensuring Data Confidentiality in Artificial Intelligence Projects
 - 3.6.2. Advanced Techniques for Patient Data Anonymization
 - 3.6.3. Legal and Ethical Challenges in the Protection of Personal Data
 - 3.6.4. Impact of security breaches on public trust and confidence
- 3.7. Artificial Intelligence and Sustainability in Biomedical Research with Green Algorithm
 - 3.7.1. Use of Artificial Intelligence to Improve Efficiency and Sustainability in Research
 - 3.7.2. Life Cycle Assessment of Artificial Intelligence Technologies in Healthcare
 - 3.7.3. Environmental Impact of Artificial Intelligence Technology Infrastructure
 - 3.7.4. Sustainable Practices in the Development and Deployment of Artificial Intelligence
- 3.8. Auditing and Explainability of Artificial Intelligence Models in the Clinical Setting with IBM AI Fairness 360
 - 3.8.1. Importance of Regular Auditing of AI Algorithms
 - 3.8.2. Techniques to Improve the Explainability of AI Models
 - 3.8.3. Challenges in Communicating AI-Based Decisions to Patients and Physicians
 - 3.8.4. Regulations on the Transparency of Artificial Intelligence Algorithms in Healthcare
- 3.9. Innovation and Entrepreneurship in the Field of Clinical Artificial Intelligence with Hindsight
 - 3.9.1. Opportunities for Startups in Artificial Intelligence Technologies for Healthcare
 - 3.9.2. Collaboration Between the Public and Private Sectors in the Development of Artificial Intelligence
 - 3.9.3. Challenges for Entrepreneurs in the Healthcare Regulatory Environment
 - 3.9.4. Success Stories and Lessons Learned in Clinical Artificial Intelligence Entrepreneurship
- 3.10. Ethical Considerations in International Clinical Research Collaboration with Global Alliance for Genomics and Health with GA4GH
 - 3.10.1. Ethical Coordination in International AI Projects
 - 3.10.2. Managing Cultural and Regulatory Differences in International Collaborations
 - 3.10.3. Strategies for Equitable Inclusion in Global Studies
 - 3.10.4. Challenges and Solutions in Data Sharing



You will have unrestricted access to all the contents of the Virtual Campus and you will be able to download them to consult them whenever you want. Enroll now!"

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.



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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"

At TECH we use the Case Method

What should a professional do in a given situation? Throughout the program, students will face multiple simulated clinical cases, based on real patients, in which they will have to do research, establish hypotheses, and ultimately resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method. Specialists learn better, faster, and more sustainably over time.

With TECH you will experience a way of learning that is shaking the foundations of traditional universities around the world.



According to Dr. Gérvas, the clinical case is the annotated presentation of a patient, or group of patients, which becomes a "case", an example or model that illustrates some peculiar clinical component, either because of its teaching power or because of its uniqueness or rarity. It is essential that the case is based on current professional life, trying to recreate the real conditions in the physician's professional practice.

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Did you know that this method was developed in 1912, at Harvard, for law students? The case method consisted of presenting students with real-life, complex situations for them to make decisions and justify their decisions on how to solve them. In 1924, Harvard adopted it as a standard teaching method”

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 evaluate 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.

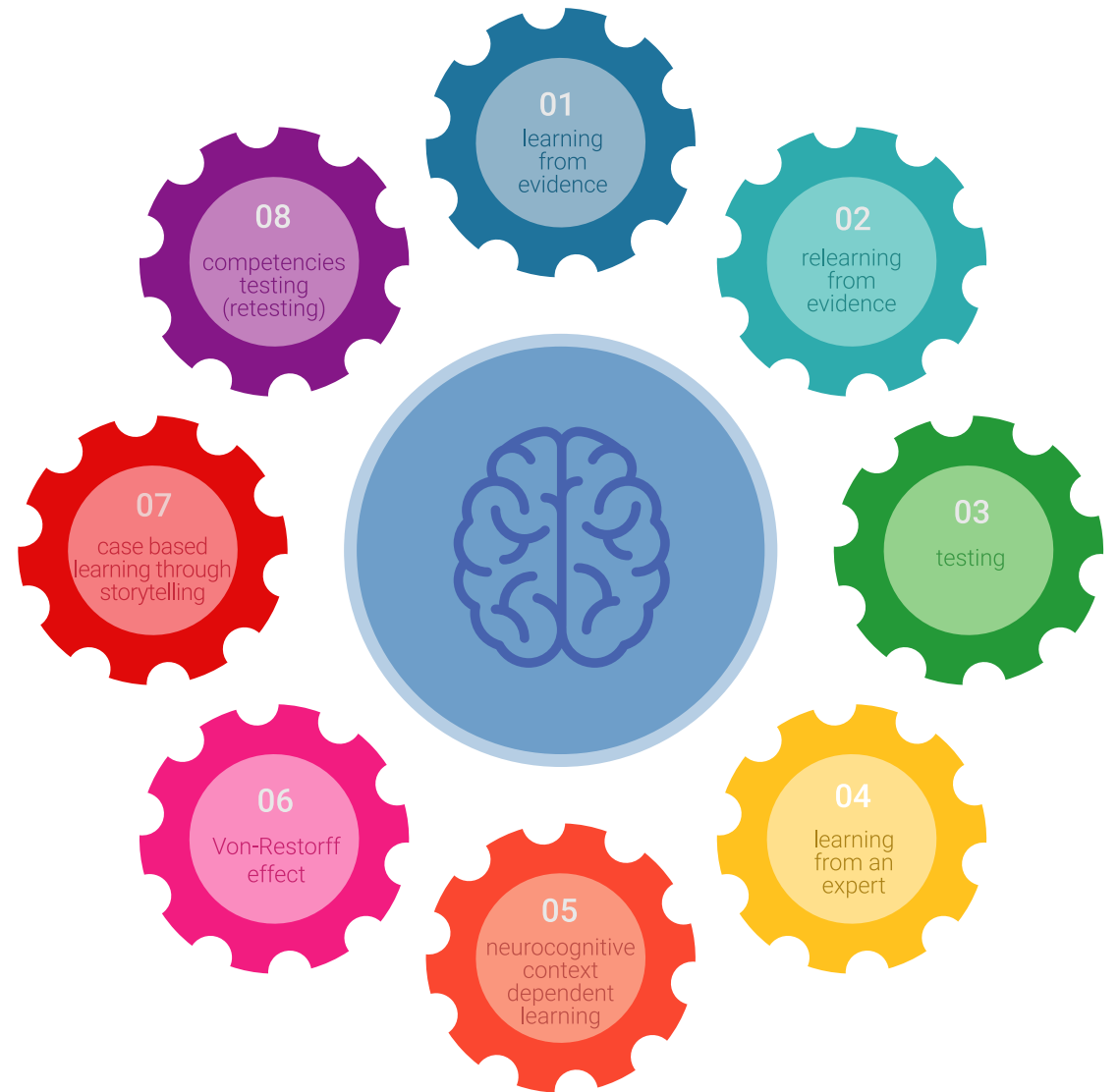


Relearning Methodology

At TECH we enhance the case method with the best 100% online teaching methodology available: Relearning.

This university is the first in the world to combine the study of clinical cases with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, a real revolution with respect to the mere study and analysis of cases.

Professionals will learn through real cases and by resolving complex situations in simulated learning environments. These simulations are developed using state-of-the-art software to facilitate immersive learning.



At the forefront of world teaching, the Relearning method has managed to improve the overall satisfaction levels of professionals who complete their studies, with respect to the quality indicators of the best online university (Columbia University).

With this methodology, more than 250,000 physicians have been trained with unprecedented success in all clinical specialties regardless of surgical load. Our pedagogical methodology is developed in a highly competitive environment, with a university student body with a strong socioeconomic profile and an average age of 43.5 years old.

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.

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.

The overall score obtained by TECH's learning system is 8.01, according to the highest international standards.



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.



Surgical Techniques and Procedures on Video

TECH introduces students to the latest techniques, the latest educational advances and to the forefront of current medical techniques. All of this in direct contact with students and explained in detail so as to aid their assimilation and understanding. And best of all, you can watch the videos as many times as you like.



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.

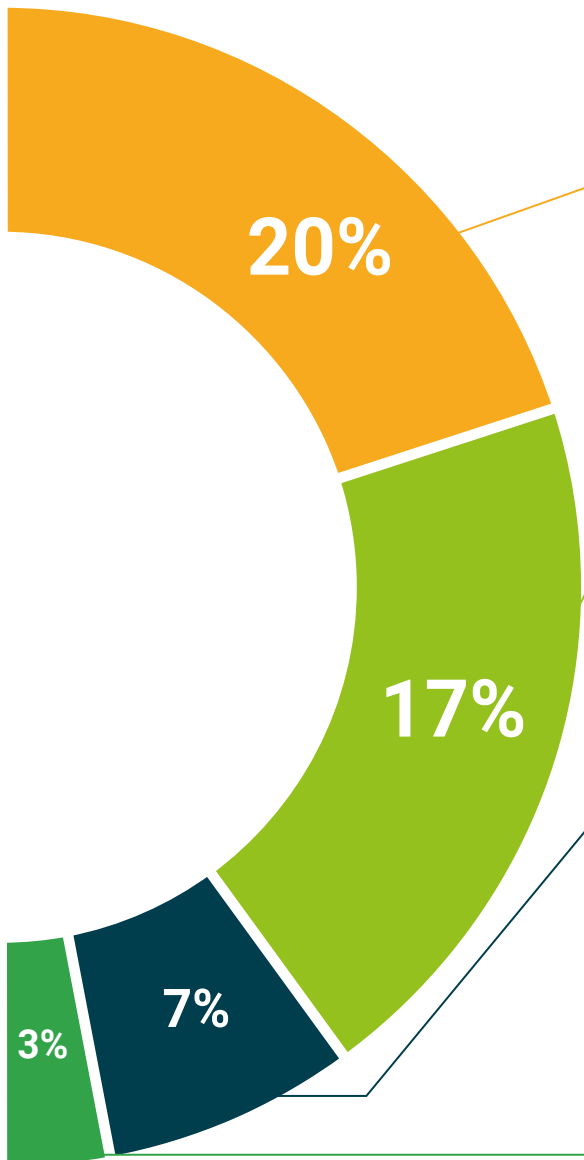
This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



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.





Expert-Led Case Studies and Case Analysis

Effective learning ought to be contextual. Therefore, TECH presents real cases in which the expert will guide students, focusing on and solving the different situations: a clear and direct way to achieve the highest degree of understanding.



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.



Classes

There is scientific evidence on the usefulness of learning by observing experts. The system known as Learning from an Expert strengthens knowledge and memory, and generates confidence in 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.



06

Certificate

This Postgraduate Diploma in Artificial Intelligence and Big Data Technologies for Medical Imaging Processing guarantees students, in addition to the most rigorous and up-to-date education, access to a 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 **Postgraduate Diploma in Artificial Intelligence and Big Data Technologies for Medical Imaging Processing** 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.

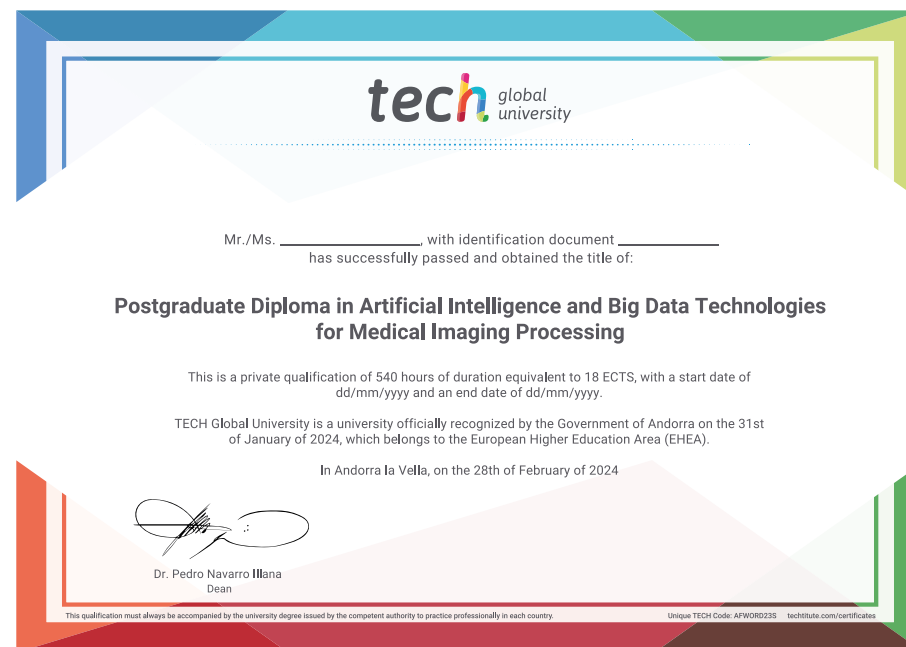
This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Postgraduate Diploma in Artificial Intelligence and Big Data Technologies for Medical Imaging Processing**

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.



Postgraduate Diploma
Artificial Intelligence and
Big Data Technologies for
Medical Imaging Processing

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

Postgraduate Diploma

Artificial Intelligence and Big Data Technologies
for Medical Imaging Processing