



Postgraduate Certificate Personalization of Education through Artificial Intelligence

» Modality: online

» Duration: 6 weeks

» Certificate: TECH Technological University

» Dedication: 16h/week

» Schedule: at your own pace

» Exams: online

We bsite: www.techtitute.com/pk/education/postgraduate-certificate/personalization-education-artificial-intelligence

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tech 06 | Introduction

More and more educational institutions are becoming aware of the benefits that Machine Learning offers to the world of Teaching. Among them, the personalization of learning according to the individual needs of students stands out. Teachers are thus using Al's own mechanisms to create adaptive teaching itineraries. In addition, this technology provides students with immediate feedback to students by identifying errors and areas for improvement. This allows students to learn much more effectively by taking into account their personal difficulties.

In this context, TECH is developing a Postgraduate Certificate that will delve into the implementation of AI in the educational environment to personalize educational processes. The syllabus will delve into the use of *Machine Learning* techniques to interpret trends and patterns. At the same time, the syllabus will offer multiple indicators of academic performance from educational data. Teachers will establish key metrics to evaluate student performance and identify areas for improvement. In addition, the program will address the most modern AI tools to make educational decisions based on accurate information. The program will also include the analysis of case studies of successful predictions, so that professionals can learn from the lessons and use them in their educational environments.

On the other hand, the program's methodology will reflect the need for flexibility and adaptation to contemporary professional demands. With a 100% online format, it will allow graduates to advance their education without compromising their job responsibilities. In addition, the application of the *Relearning* system, based on the reiteration of key concepts, ensures a deep and lasting understanding. This pedagogical approach reinforces the ability of professionals to effectively apply the knowledge acquired in their daily practice. In turn, the only thing physicians will need to complete this academic pathway will be a device with Internet access.

The Postgraduate Certificate in Personalization of Education through Artificial Intelligence contains the most complete and up-to-date program on the market. Its most notable features are:

- The development of case studies presented by experts in Personalization of Education through AI
- The graphic, schematic and practical contents of the book provide theoretical and practical information on those 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 innovative data protection techniques to ensure the privacy of educational systems"

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

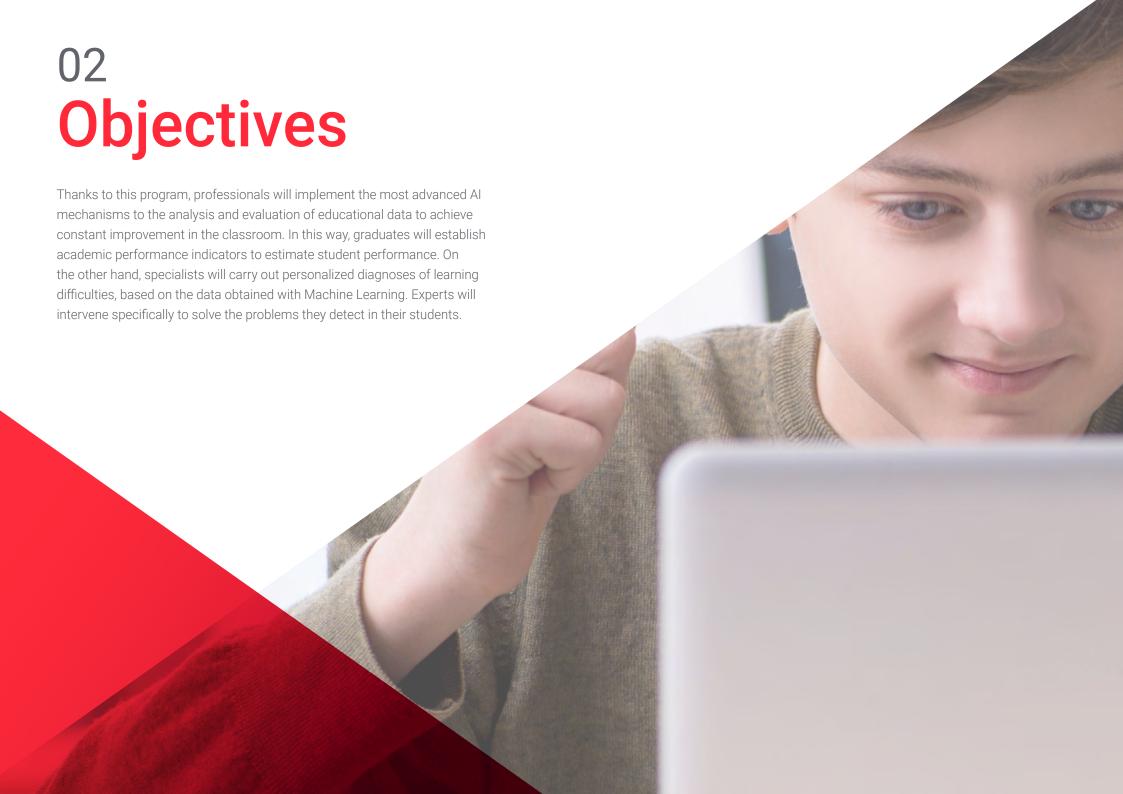
The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide immersive education programmed to learn in real situations.

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 use the most advanced Classification and Regression Algorithms to predict educational trends.

Thanks to the Relearning system used by TECH you will reduce the long hours of study and memorization.







tech 10 | Objectives



General Objectives

- Understand the fundamental ethical principles related to the application of Artificial Intelligence (AI) in educational settings
- Analyze the current legislative framework and the challenges associated with the implementation of AI in educational settings
- Develop critical skills to evaluate the ethical and social impact of AI in education
- Encourage the responsible design and use of AI solutions in educational contexts, considering cultural diversity and gender equity
- Train in the design and implementation of AI projects in the educational environment
- Provide an in-depth understanding of the theoretical foundations of Al, including machine learning, neural networks, and natural language processing
- Develop skills to integrate AI projects effectively and ethically into the educational syllabus
- Understand the applications and impact of AI in teaching and learning, critically assessing its current and potential uses
- Apply generative Al to personalize and enrich teaching practice, creating adaptive educational materials
- Identify, evaluate, and apply the latest trends and emerging technologies in Al relevant to education, reflecting on their challenges and opportunities





Specific Objectives

- Apply AI in the analysis and evaluation of educational data to drive continuous improvement in educational settings
- Define academic performance indicators based on educational data to measure and improve student performance
- Implement AI technologies and algorithms to perform predictive analytics on academic performance data
- Perform personalized diagnostics of learning difficulties through data analysis with AI, identifying particular educational needs and designing targeted interventions
- Address security and privacy in the processing of educational data when applying Al tools, ensuring regulatory and ethical compliance



As this is an online program, you will be able to combine your studies with the rest of your daily activities"







tech 14 | Course Management

Management



Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometeus Global Solutions
- CTO at Korporate Technologies
- CTO at Al Shephers Gmb+
- 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
- Ph.D. in Psychology from the University of Castilla-La Mancha and Executive MBA from the University Isabel I
- Professional Master's Degree in Sales and Marketing Management, Isabel I University
- Expert Master's Degree in Big Data by Hadoop Training
- Professional Master's Degree in Advanced Information Technologies from the University of Castilla La Mancha
- Member of: SMILE Research Group



Mr. Nájera Puente, Juan Felipe

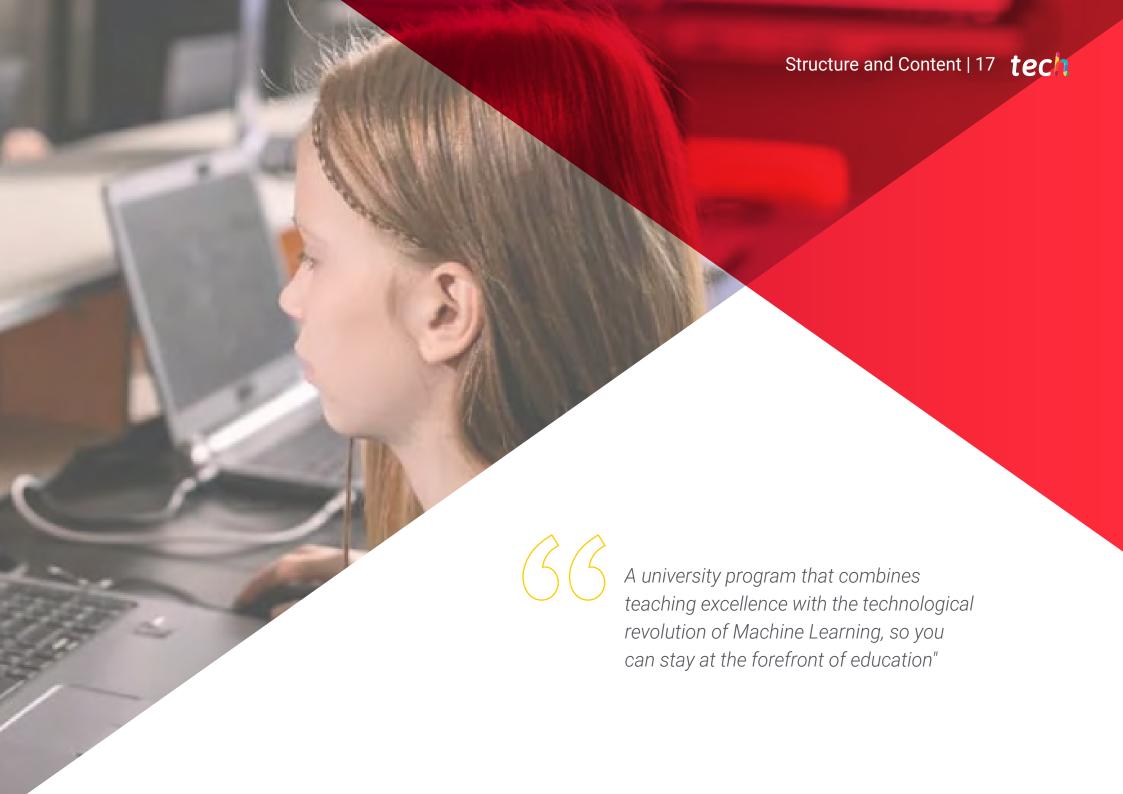
- Data Analyst and Data Scientist
- Director of Studies and Research at the Council for Quality Assurance in Higher Education
- Production Programmer at Confiteca C.A
- Processes Consultant at Esefex Consulting
- Academic Planning Analyst at San Francisco de Quito University
- Professional Master's Degree in *Big Data* and Data Science at the International University of Valencia
- Industrial Engineer from San Francisco de Quito University

Professors

Ms. Martínez Cerrato, Yésica

- Education, Business and Marketing Specialist
- Responsible for Technical Training at Securitas Seguridad España
- Product Manager in Electronic Security at Securitas Seguridad España
- Business Intelligence Analyst at Ricopia Technologies
- Computer Technician and Head of OTEC Computer Classrooms at the University of Alcalá de Henares
- Collaborator in the ASALUMA Association
- Degree in Electronic Communications Engineering at the Polytechnic School, University of Alcalá de Henares, Madrid





tech 18 | Structure and Content

Module 1. Data analysis and application of AI techniques for educational personalization

- 1.1. Identification, Extraction and Preparation of Educational Data
 - 1.1.1. Methods of Collection and Selection of Relevant Data in Educational Settings
 - 1.1.2. Data Cleaning and Normalization Techniques for Educational Analyses
 - 1.1.3. Importance of Data Integrity and Quality in Educational Research
- 1.2. Analysis and Evaluation of Educational Data with AI for Continuous Improvement in the Classroom
 - 1.2.1. Use of Machine Learning Techniques to Interpret Educational Trends and Patterns
 - 1.2.2. Evaluating the Impact of Pedagogical Strategies using Data Analytics
 - 1.2.3. Integration of Al-based Feedback for the Optimization of the Teaching Process
- 1.3. Definition of Academic Performance Indicators from Educational Data
 - 1.3.1. Establishment of Key Metrics for Evaluating Student Achievement
 - 1.3.2. Comparative Analysis of Indicators to Identify Areas for Improvement
 - 1.3.3. Correlation Between Academic Indicators and External Factors Using Al
- 1.4. Al Tools for Educational Decision Making and Monitoring
 - 1.4.1. Al-based Decision Support Systems for Educational Administrators
 - 1.4.2. Role of AI in Educational Resource Planning and Allocation
 - 1.4.3. Optimization of Educational Processes through Predictive Analytics
- 1.5. Al Technologies and Algorithms for Predictive Analysis of Academic Achievement Data
 - 1.5.1. Fundamentals of Predictive Modeling in Education
 - 1.5.2. Use of Classification and Regression Algorithms to Predict Trends in Education
 - 1.5.3. Case Studies of Successful Predictions in Educational Environments





Structure and Content | 19 tech

- 1.6. Application of Data Analytics with Al for the Prevention and Solution of Educational Problems
 - 1.6.1. Early Identification of Academic Risks through Predictive Analytics
 - 1.6.2. Data-driven Intervention Strategies to Address Educational Challenges
 - 1.6.3. Assessing the Impact of Al-based Solutions in Education
- 1.7. Personalized Diagnosis of Learning Difficulties from Data Analytics with Al
 - 1.7.1. Al Techniques for the Identification of Learning Styles and Learning Difficulties
 - 1.7.2. Integration of Data Analysis into Individualized Educational Support Plans
 - 1.7.3. Case Studies of Diagnoses Improved by the Use of Al
- 1.8. Data Analysis and Application of Al for Identification of Special Educational Needs
 - 1.8.1. Al Approaches to the Detection of Special Educational Needs
 - 1.8.2. Personalization of Teaching Strategies Based on Data Analysis
 - 1.8.3. Evaluation of the Impact of AI on Educational Inclusion
- 1.9. Personalization of Learning with AI from Academic Performance Data Analytics
 - 1.9.1. Creating Adaptive Learning Pathways using Al
 - 1.9.2. Implementation of Recommender Systems for Educational Resources
 - 1.9.3. Individual Progress Measurement and Real-Time Adjustments via Al
- 1.10. Security and Privacy in the Processing of Educational Data
 - 1.10.1. Ethical and Legal Principles in the Management of Educational Data
 - 1.10.2. Data Protection and Privacy Techniques in Al-based Educational Systems
 - 1.10.3. Case Studies on Security Breaches and their Impact on Education



Don't miss the opportunity to boost your career through this innovative program in just 6 weeks"





tech 22 | Methodology

At TECH Education School we use the Case Method

In a given situation, what should a professional do? Throughout the program students will be presented with multiple simulated cases based on real situations, where they w have to investigate, establish hypotheses and, finally, resolve the situation. There is an abundance of scientific evidence on the effectiveness of the method.

With TECH, educators can experience a learning methodology that is shaking the foundations of traditional universities around the world.



It is a technique that develops critical skills and prepares educators to make decisions, defend their arguments, and contrast opinions.



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:

- Educators who follow this method not only grasp concepts, but also develop their mental capacity, by evaluating real situations and applying their knowledge.
- 2. The learning process is solidly focused on practical skills that allow educators to better integrate the knowledge into daily practice.
- **3.** Ideas and concepts are understood more efficiently, given that the example situations are based on real-life teaching.
- **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.



tech 24 | Methodology

Relearning Methodology

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

Our University is the first in the world to combine case studies with a 100% online learning system based on repetition, combining a minimum of 8 different elements in each lesson, which represent a real revolution with respect to simply studying and analyzing cases.

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



Methodology | 25 tech

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 we have trained more than 85,000 educators with unprecedented success in all specialties. 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 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 our learning system is 8.01, according to the highest international standards.

tech 26 | Methodology

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



Study Material

All teaching material is produced by the specialist educators who teach the course, specifically for the course, so that the teaching content is really 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.



Educational Techniques and Procedures on Video

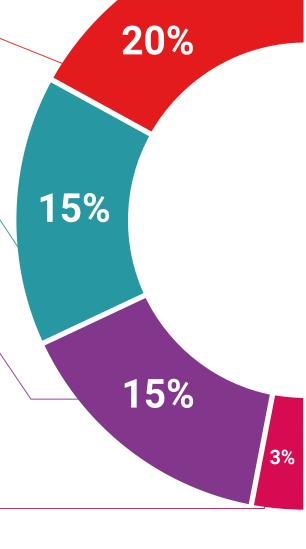
TECH introduces students to the latest techniques, with the latest educational advances, and to the forefront of Education. All this, first-hand, with the maximum rigor, explained and detailed for your assimilation and understanding. And best of all, you can watch them as many times as you want.



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 multimedia content presentation training Exclusive system 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.



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 your goals.



Classes

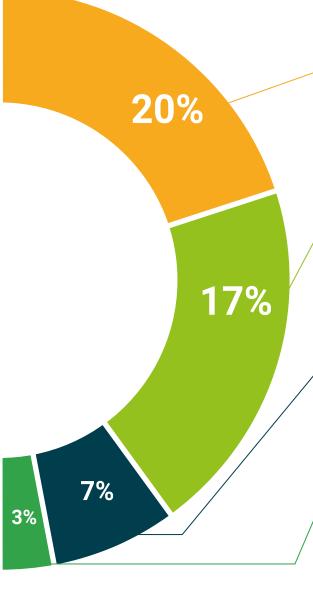
There is scientific evidence suggesting that observing third-party experts can be useful.

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



Quick Action Guides

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







tech 30 | Certificate

The Postgraduate Certificate in Personalization of Education through Artificial Intelligence contains the most complete and up-to-date program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Certificate** issued by **TECH Technological University** via tracked delivery*.

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the Postgraduate Certificate, and meets the requirements commonly demanded by labor exchanges, competitive examinations and professional career evaluation committees.

Title: Postgraduate Certificate in Personalization of Education through Artificial Intelligence

Official N° of Hours: 150 h.



^{*}Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

technological university

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