Postgraduate Diploma
Artificial Intelligence and User Experience Design

tech global university

Postgraduate Diploma
Artificial Intelligence
and User Experience Design

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

Website: **www.techtitute.com/us/artificial-intelligence/postgraduate-certificate/artificial-intelligence-user-experience-design**

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01
Introduction

Artificial Intelligence (AI) has transformative applications in the field of Design. Its importance lies in its ability to streamline processes, personalize designs or help experts make more informed decisions. To benefit from this, professionals need to expand their knowledge of the subject on an ongoing basis. In addition, it is key for them to stay on the cutting edge of technology, to implement the latest trends into their creative processes and thus improve their users' experiences. In this context, TECH has launched an advanced training that will help designers to apply Machine Learning in their practices, to provide services characterized by their maximum customization. In addition, it is taught 100% online for the convenience of students.

" *You will master Generative Design at the best digital university in the world, according to Forbes"*

Predictive Analytics of user interactions using AI is a valuable tool, aimed at optimizing consumer experiences for both specific products and services. For example, by anticipating their preferences, designers can create more individualized and engaging interfaces. Along these lines, by anticipating potential difficulties in navigation, specialists are able to take steps to improve retention or even avoid frustration for individuals. To develop the most accurate studies, professionals must consider steps to get the most out of them. These include factors such as personalized recommendations, anomaly detection or audience segmentation.

For this reason, TECH has developed this Postgraduate Diploma, which will deal with design-user interaction and AI applications. In this way, the syllabus will offer students contextual suggestions based on audience behavior, as well as adaptive designs for different devices. In addition, the syllabus will delve into the dynamic personalization of user interfaces to capture their attention.

It will also provide the most effective strategies to successfully incorporate Machine Learning tools to creative procedures. It is worth mentioning that the importance of ethics will be highlighted during the creation of designs, through actions aimed at reducing the environmental impact and reducing the use of waste. In this way, graduates will stand out for offering the most innovative artistic pieces, taking into account deontological considerations in the industry.

As for the methodology of this program, it should be noted that it reinforces its innovative character. TECH provides students with a 100% online educational environment, adapting to the needs of busy professionals who want to advance their careers. It also 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.

This **Postgraduate Diploma in Artificial Intelligence and User Experience Design** 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 Design with IA and user experience

- The graphic, schematic and practical contents of the book provide technical 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 apply the most effective strategies to perform continuous analysis of the user experience to implement improvements"

You will delve into the automatic creation of editorial layouts with algorithms, to save time and give your works consistency.

"*Your creative design processes will stand out for their ethics and sustainability, thanks to this 100% online university program*"

With the Relearning system, you will integrate the concepts in a natural and progressive way. Forget about memorizing!

The program's teaching staff includes professionals from the sector who contribute their work experience to this training 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.

02
Objectives

Thanks to this program, students will obtain competencies to implement Machine Learning resources in their design projects. Graduates will master the automatic generation of content, design optimization and pattern recognition. Simularly, they will employ predictive algorithms to anticipate user interactions, enabling proactive responses. Artists will also acquire an ethical awareness in decision making, driving sustainable practices such as waste reduction or the integration of responsible technologies. In addition, they will ensure consumers immersive experiences that always maintain their privacy.

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You will be prepared to overcome the challenges you face during the development of your pieces and turn them into opportunities to innovate"

General Objectives

- 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
- Develop skills to implement artificial intelligence tools in design projects, including automatic content generation, design optimization and pattern recognition
- Apply collaborative tools, taking advantage of Artificial Intelligence to improve communication and efficiency in design teams
- Incorporate emotional aspects into designs through techniques that effectively connect with the audience
- Understand the symbiosis between interactive design and Artificial Intelligence to optimize the user experience
- Develop skills in adaptive design, considering user behavior and applying advanced AI tools
- Critically analyze the challenges and opportunities when implementing personalized designs in industry using Artificial Intelligence
- Understand the transformative role of Artificial Intelligence in the innovation of design and manufacturing processes
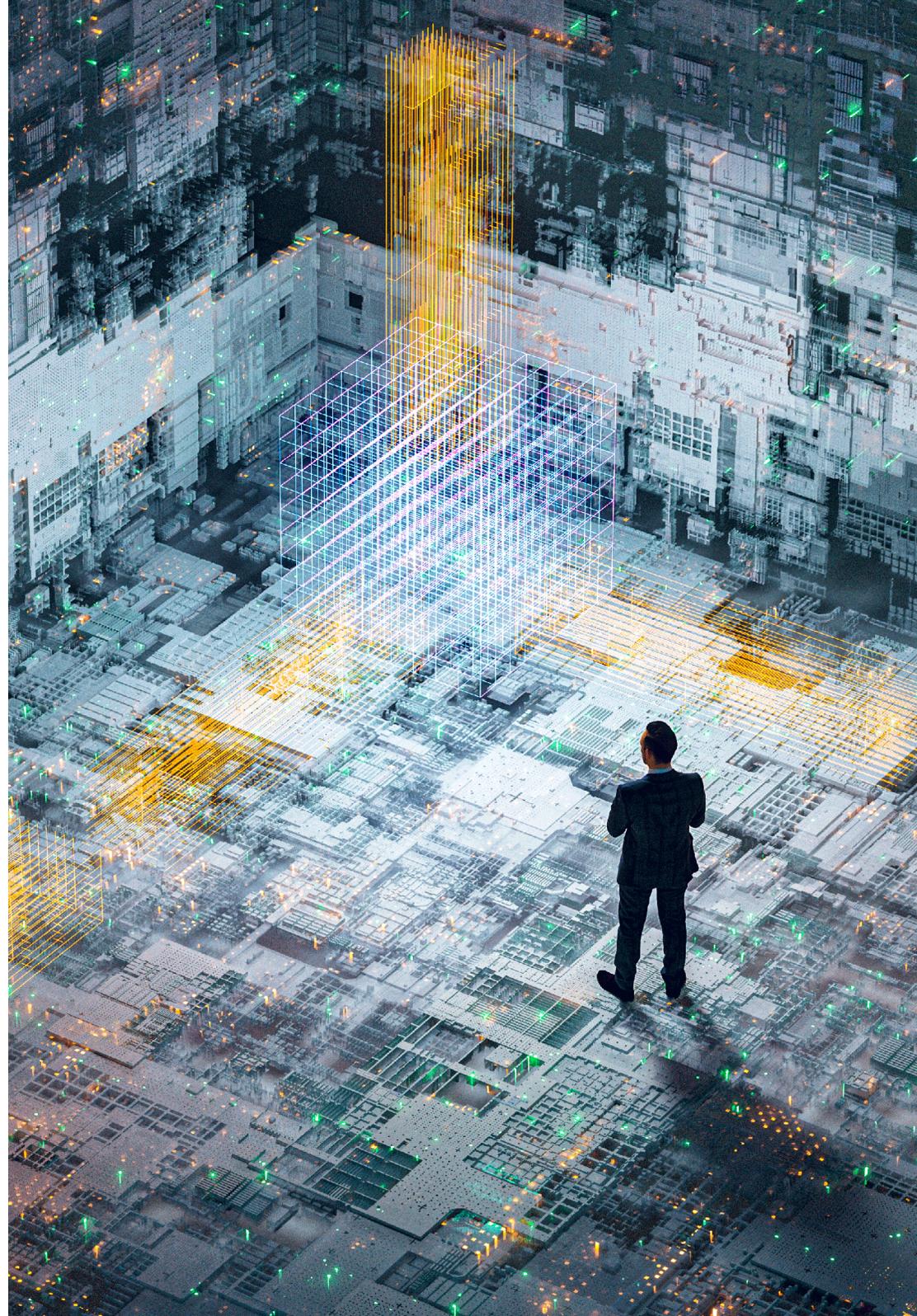
Specific Objectives

Module 1. Practical Applications of Artificial Intelligence in Design

- Apply collaborative tools, leveraging AI to improve communication and efficiency in design teams
- Incorporate emotional aspects into designs through techniques that effectively connect with the audience, exploring how AI can influence the emotional perception of Design
- Master tools and frameworks specific to the application of AI in Design, such as GANs (Generative Adversarial Networks) and other relevant libraries
- Employ AI to generate images, illustrations and other visual elements automatically
- Implementing AI techniques to analyze design-related data, such as navigation behavior and user feedback

Module 2. Design-User Interaction and Artificial Intelligence

- Understand the symbiosis between Interactive Design and AI to optimize the user experience
- Develop skills in Adaptive Design, considering user behavior and applying advanced AI tools
- Critically analyze the challenges and opportunities when implementing personalized designs in industry using IA
- Use predictive AI algorithms to anticipate user interactions, enabling proactive and efficient design responses
- Develop AI-based recommender systems that suggest relevant content, products or actions to users

Module 3. Ethics and Environment in Design and Artificial Intelligence

- Understand the ethical principles related to Design and Artificial Intelligence, cultivating an ethical awareness in decision making
- Focus on the ethical integration of technologies, such as emotion recognition, ensuring immersive experiences that respect the user's privacy and dignity
- Promote social and environmental responsibility in Game Design and in the industry in general, considering ethical aspects in representation and gameplay
- Generate sustainable practices in design processes, ranging from waste reduction to the integration of responsible technologies, contributing to the preservation of the environment
- Analyze how AI technologies can affect society, considering strategies to mitigate their possible negative impacts

"Take advantage of this opportunity and get up to date on the latest trends in virtual assistants thanks to this revolutionary training"

03

Course Management

In order to maintain intact the excellent educational level that characterizes TECH programs, this Postgraduate Diploma is directed and taught by leading professionals in the field of AI and User Experience Design. These experts have an extensive professional background, which has allowed them to provide innovative solutions in institutions of national prestige. In addition, since these specialists are responsible for developing the educational content available in this training, the knowledge and skills that students will acquire will be applicable in their work experience.

You will have access to a syllabus designed by a reputable teaching staff, which will guarantee you a successful learning"

International Guest Director

Flaviane Peccin is a leading data scientist with more than a decade of international experience applying predictive modeling and machine learning in various industries. Throughout her career, she has led innovative projects in the field of Artificial Intelligence, data analytics and data-driven business decision making, consolidating herself as an influential figure in the digital transformation of large corporations.

In this regard, she has held roles of great importance at Visa, as Director of Artificial Intelligence and Machine Learning, where she has been responsible for defining and executing the company's global data science strategy, with a particular focus on Machine Learning as a service. In addition, her leadership has ranged from collaboration with commercial and scientific stakeholders, to the implementation of advanced algorithms and scalable technology solutions, which have driven efficiency and accuracy in decision making. As such, her experience in integrating emerging trends in Artificial Intelligence and Gen AI has positioned her at the forefront of her field.

She has also worked as Director of Data Science in this same organization, leading a team of experts that has provided analytical consulting to clients in Latin America, developing predictive models that have optimized the cardholder lifecycle and significantly improved the management of credit and debit portfolios. Her career has also included key positions at Souza Cruz, HSBC, GVT and Telefónica, where she has contributed to the development of innovative solutions for risk management, analytical models and fraud control.

Therefore, with extensive experience in Latin American and US markets, Flaviane Peccin has been instrumental in the adaptation of products and services, using advanced statistical techniques and deep data analysis.
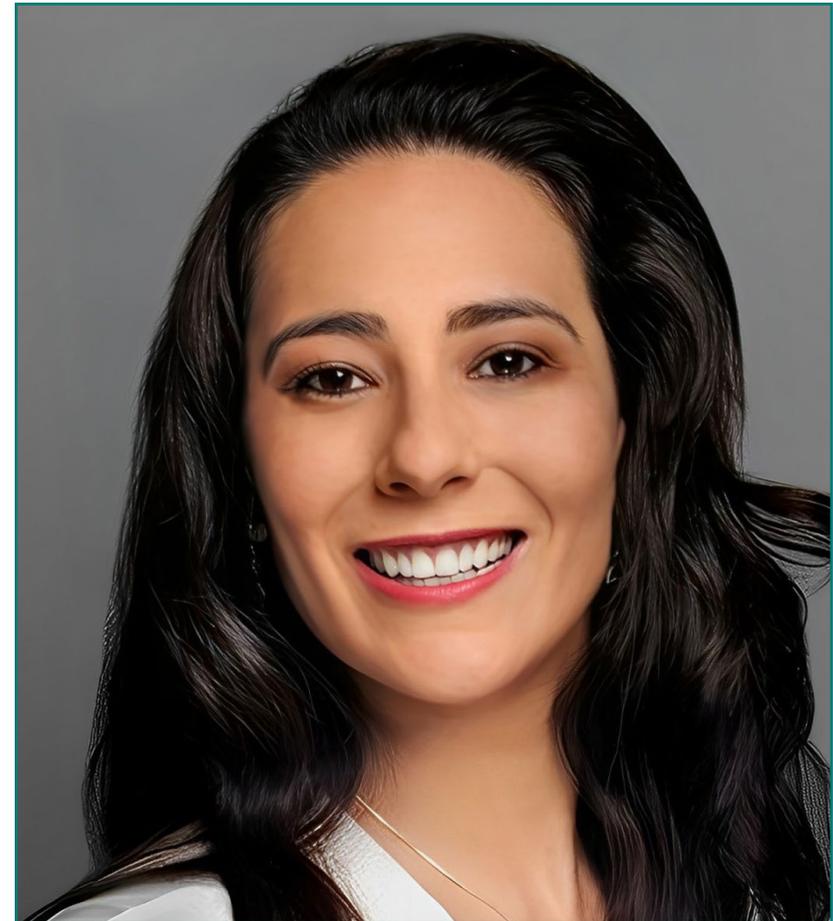
Ms. Peccin, Flaviane

- Director of Artificial Intelligence and Machine Learning at Visa, Miami, United States
- Director of Data Science at Visa
- Customer Analytics Manager at Visa
- Coordinator/Data Science Specialist at Souza Cruz
- Quantitative Modeling Analyst at HSBC
- Credit and Collections Analyst at GVT
- Statistical Analyst at Telefónica
- Master's Degree in Numerical Methods in Engineering from Universidade Federal do Paraná
- Bachelor's Degree in Statistics from Universidade Federal do Paraná

Thanks to TECH, you will be able to learn with the best professionals in the world"

Management

Dr. Peralta Martín-Palomino, Arturo

- CEO and CTO at Prometeus 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
- Professional Master's Degree in Executive MBA by the Isabel I University
- 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. Maldonado Pardo, Chema

- Graphic Design Specialist
- Graphic Designer at DocPath Document Solutions S.L.
- Founding Partner and Head of the Design and Advertising Department at D.C.M. Difusión Integral de Ideas, C.B.
- Head of the Design and Digital Printing Department at Ofipaper, La Mancha S.L.
- Graphic Designer in Ático, Estudio Gráfico
- Graphic Designer and Craftsman Printer at Lozano Artes Gráficas
- Layout and Graphic Designer in Gráficas Lozano
- ETSI Telecommunications by the Polytechnic University of Madrid
- ETS Computer Systems ETSI by the University of Castilla-La Mancha

Professors

Ms. Parreño Rodríguez, Adelaida

- *Technical Developer & Energy Communities Engineer* at the University of Murcia
- *Manager in Research & Innovation in European Projects* at the University of Murcia
- *Technical Developer & Energy/Electrical Engineer & Researcher* in PHOENIX Project and FLEXUM (ONENET) Project
- Content Creator in Global UC3M Challenge
- Ginés Huertas Martínez Award (2023)
- Professional Master's Degree in Renewable Energies from the Polytechnic University of Cartagena.
- Degree in Electrical Engineering (bilingual) from Carlos III University of Madrid

04
Structure and Content

This Postgraduate Diploma will dive into the intersection between Graphic Design and AI, enriching students' creative procedures. To this end, the syllabus will cover from the automatic generation of visual content to the prediction of trends or enhanced collaboration. It will also delve into fundamental aspects such as contextual adaptation, integration of virtual assistants and emotional analysis of users. In this way, graduates will acquire skills to develop digital experiences defined by their personalization and innovation.

"

You will handle the most advanced tools of Artificial Intelligence to develop the most creative and exclusive designs"

Module 1. Practical Applications of Artificial Intelligence in Design

1.1.   Automatic Image Generation in Graphic Design

   1.1.1.   Fundamental Concepts of Image Generation

   1.1.2.   Tools and Frameworks for Automatic Graphic Generation

   1.1.3.   Social and Cultural Impact of Generative Design

   1.1.4.   Current Trends in the Field and Future Developments and Applications

1.2.   Dynamic Personalization of User Interfaces Using AI

   1.2.1.   UI/UX Personalization Principles

   1.2.2.   Recommendation Algorithms in UI Customization

   1.2.3.   User Experience and Continuous Feedback

   1.2.4.   Practical Implementation in Real Applications

1.3.   Generative Design: Applications in Industry and Art

   1.3.1.   Fundamentals of Generative Design

   1.3.2.   Generative Design in Industry

   1.3.3.   Generative Design in Contemporary Art

   1.3.4.   Challenges and Future Advances in Generative Design

1.4.   Automatic Creation of Editorial Layouts with Algorithms

   1.4.1.   Principles of Automatic Editorial Layout

   1.4.2.   Content Distribution Algorithms

   1.4.3.   Optimization of Spaces and Proportions in Editorial Design

   1.4.4.   Automation of the Revision and Adjustment Process

1.5.   Procedural Generation of Content in Videogames

   1.5.1.   Introduction to Procedural Generation in Videogames

   1.5.2.   Algorithms for the Automatic Creation of Levels and Environments

   1.5.3.   Procedural Narrative and Branching in Videogames

   1.5.4.   Impact of Procedural Generation on the Player Experience

1.6.   Pattern Recognition in Logos with Machine Learning

   1.6.1.   Fundamentals of Pattern Recognition in Graphic Design

   1.6.2.   Implementation of Machine Learning Models for Logo Identification

   1.6.3.   Practical Applications in Graphic Design

   1.6.4.   Legal and Ethical Considerations in Logo Recognition
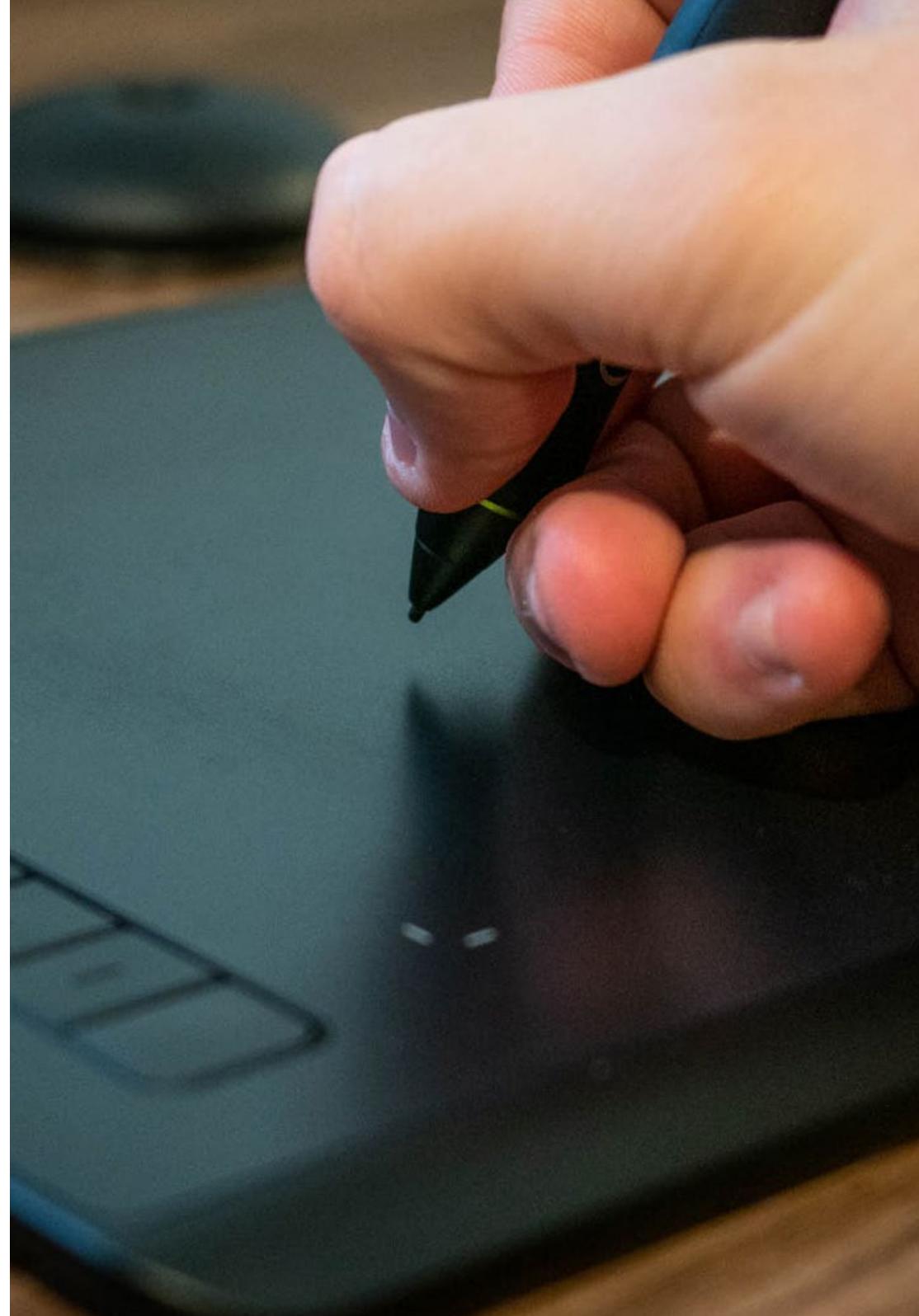
1.7. Optimization of Colors and Compositions with AI

    1.7.1. Color Psychology and Visual Composition

    1.7.2. Color Optimization Algorithms in Graphic Design

    1.7.3. Automatic Composition of Visual Elements

    1.7.4. Evaluation of the Impact of Automatic Optimization on User Perception

1.8. Predictive Analysis of Visual Trends in Design

    1.8.1. Data Collection and Current Trends

    1.8.2. Machine Learning Models for Trend Prediction

    1.8.3. Implementation of Proactive Design Strategies

    1.8.4. Principles in the Use of Data and Predictions in Design

1.9. AI-assisted Collaboration in Design Teams

    1.9.1. Human-IA Collaboration in Design Projects

    1.9.2. Platforms and Tools for AI-assisted Collaboration

    1.9.3. Best Practices in AI-assisted Technology Integration

    1.9.4. Future Perspectives on Human-AI Collaboration in Design

1.10. Strategies for the Successful Incorporation of AI in Design

    1.10.1. Identification of AI-solvable Design Needs

    1.10.2. Evaluation of Available Platforms and Tools

    1.10.3. Effective Integration in Design Projects

    1.10.4. Continuous Optimization and Adaptability

Module 2. Design-User Interaction and AI

2.1. Behavior-Based Design Contextual Suggestions

    2.1.1. Understanding User Behavior in Design

    2.1.2. AI-based Contextual Suggestion Systems

    2.1.3. Strategies to Ensure User Transparency and Consent

    2.1.4. Trends and Potential Improvements in Behavioral Personalization

2.2. Predictive Analysis of User Interactions

    2.2.1. Importance of Predictive Analytics in User-Design Interactions

    2.2.2. Machine Learning Models for Predicting User Behavior

    2.2.3. Integration of Predictive Analytics in User Interface Design

    2.2.4. Challenges and Dilemmas in Predictive Analytics

2.3. Adaptive Design to Different Devices with AI

    2.3.1. Device Adaptive Design Principles

    2.3.2. Content Adaptation Algorithms

    2.3.3. Interface Optimization for Mobile and Desktop Experiences

    2.3.4. Future Developments in Adaptive Design with Emerging Technologies

2.4. Automatic Generation of Characters and Enemies in Video Games

    2.4.1. The need for Automatic Generation in the Development of Videogames

    2.4.2. Algorithms for Character and Enemy Generation

    2.4.3. Customization and Adaptability in Automatically Generated Characters

    2.4.4. Development Experiences: Challenges and Lessons Learned

2.5. AI Improvement in Game Characters

    2.5.1. Importance of Artificial Intelligence in Video Game Characters

    2.5.2. Algorithms to Improve the Behavior of Characters

    2.5.3. Continuous Adaptation and Learning of AI in Games

    2.5.4. Technical and Creative Challenges in Character AI Enhancement

2.6. Custom Design in the Industry: Challenges and Opportunities

    2.6.1. Transformation of Industrial Design with Customization

    2.6.2. Enabling Technologies for Customized Design

    2.6.3. Challenges in Implementing Customized Design at Scale

    2.6.4. Opportunities for Innovation and Competitive Differentiation

2.7. Design for Sustainability through AI

    2.7.1. Life Cycle Analysis and Traceability with Artificial Intelligence

    2.7.2. Optimization of Recyclable Materials

    2.7.3. Improvement of Sustainable Processes

    2.7.4. Development of Practical Strategies and Projects

2.8. Integration of Virtual Assistants in Design Interfaces

    2.8.1. Role of Virtual Assistants in Interactive Design

    2.8.2. Development of Virtual Assistants Specialized in Design

    2.8.3. Natural Interaction with Virtual Assistants in Design Projects

    2.8.4. Implementation Challenges and Continuous Improvement

Module 3. Ethics and Environment in Design and AI

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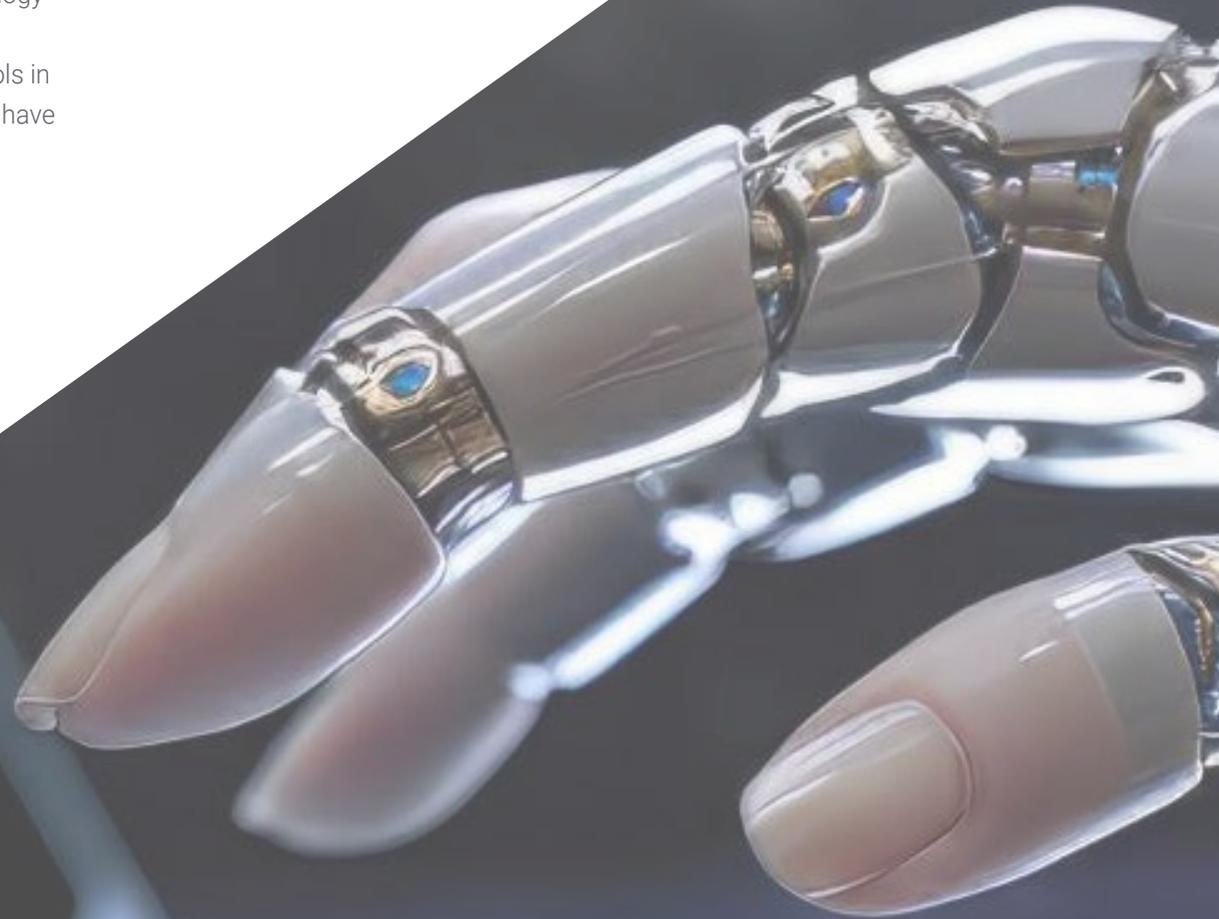
Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"

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.

01 learning from evidence

02 relearning from evidence

03 testing

04 learning from an expert

05 neurocognitive context dependent learning

06 Von-Restorff effect

07 case based learning through storytelling

08 competencies testing (retesting)

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.

20%

25%

4%

3%
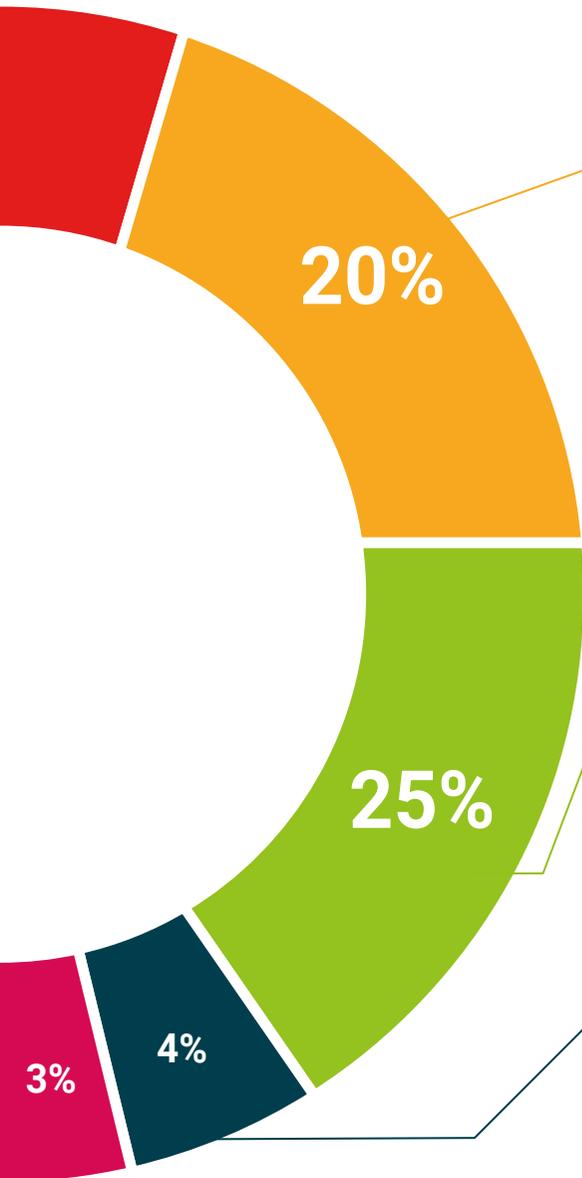
Case Studies

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.

Certificate

The Postgraduate Diploma in Artificial Intelligence and User Experience Design 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 program will allow you to obtain your **Postgraduate Diploma in Artificial Intelligence and User Experience Design** 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 Artificial Intelligence and User Experience Design**

Modality: **online**

Duration: **6 months**

Accreditation: **18 ECTS**

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

Postgraduate Diploma in Artificial Intelligence and User Experience Design

This is a program of 450 hours of duration equivalent to 18 ECTS, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH Global University is a university officially recognized by the Government of Andorra on the 31st of January of 2024, which belongs to the European Higher Education Area (EHEA).

In Andorra la Vella, on the 28th of February of 2024

Dr. Pedro Navarro Illana
Rector

Unique TECH Code: AFWORD23S   techtitute.com/certificates

*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.

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