

Internship Program

Visual Analytics and Big Data



tech global
university

Internship Program
Visual Analytics and Big Data

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01 Introduction

In the global economy, the ability to analyze large volumes of data has become a key differentiator for companies. According to a World Economic Forum report, 70% of the value generated by digitalization in the coming years will depend on the ability of organizations to analyze data. Therefore, it is essential that professionals handle the most innovative Visual Analytics and Big Data tools to extract insights from complex data, as well as to visualize them in a way that informs and improves decision making. In view of this, TECH launches the present qualification, in which, for 3 weeks, experts will be part of a distinguished entity to delve into the latest developments in this field.



Thanks to this Internship Program, you will handle the most sophisticated Machine Learning techniques to analyze data, make predictions and detect patterns”





The ability to process and analyze large volumes of data has become fundamental for organizations in all sectors. In this sense, the field of Visual Analytics and Big Data emerges as a powerful solution to address these challenges, combining advanced Data Analytics techniques with interactive visualization methods. These technologies provide experts with the ability to transform complex data into clear and actionable information, thus improving strategic decision making significantly. Given this scenario, professionals need to incorporate into their practice the most cutting-edge techniques in areas such as Machine Learning or Deep Learning in order to automate complex tasks and make more accurate predictions.

Within this framework, TECH presents an innovative Internship Program, which consists of a 120-hour on-site stay in a reference entity in Visual Analytics and Big Data. In this way, during 3 weeks, the graduates will be part of a team of specialists of the highest level, with whom they will work actively in the projects they are carrying out. Thanks to this, the graduates will acquire skills that will enable them to optimize their daily practice and raise their professional horizons to a higher level.

Throughout this Internship Program, students will be supported by an assistant tutor, who will ensure that all the requirements for which this Internship Program has been designed are met. In addition, this expert will help the graduates to consolidate their mastery of the most complex concepts and tasks. Thanks to this, after completing the course, graduates will have all the resources required to face present and future challenges in the field of Visual Analytics and Big Data.

02

Why Study an Internship Program?

In the face of technological advances, organizations seek to gain competitive advantages through the analysis of large volumes of data. For this reason, they are constantly looking to incorporate Visual Analytics and Big Data professionals to identify trends, optimize their operations and personalize customer experiences. In this context, it is essential for professionals to keep abreast of the latest innovations in this field. For this reason, TECH presents a unique and disruptive academic product in the current pedagogical landscape, which will allow experts to enter a real institution, where they will update their knowledge in this area. In this way, during 3 intensive weeks, students will join a work team where they will delve into the latest advances in subjects such as Data Science, Deep Learning or Visualization Tools.



You will acquire advanced skills to plan, execute and supervise large scale Data Analytics projects”

1. Updating from the latest technology available

Industry 4.0 has had a significant impact on the field of Visual Analytics and Big Data, transforming the way data is collected, processed, analyzed and visualized. For example, Machine Learning tools allow automating complex tasks such as pattern detection, trend detection and data classification. In view of this, TECH presents this Internship Program, where students will enter a renowned company equipped with state-of-the-art technology in this field.

2. Gaining in-depth knowledge from the experience of top specialists

During their on-site internship, students will join a team composed of experienced Visual Analytics professionals. These experts will provide graduates with all the knowledge they need to make a quality leap in their professional careers. In addition, a specifically appointed tutor will guide them at all times and ensure that the objectives for which this Internship Program has been designed are met.

3. Entering first-class professional environments

For the development of this itinerary, TECH has carefully selected the institutions where the students will take this Internship Program in Visual Analytics and Big Data. Thanks to this, graduates will enjoy an intensive stay in prestigious centers where they will be able to fully immerse themselves in the reality of a profession in full expansion that offers multiple opportunities.



4. Putting the acquired knowledge into daily practice from the very first moment

The academic market abounds with teaching programs that are limited to the mere transmission of theoretical content. In addition, these programs require long hours of teaching, which are difficult to combine with the students' professional work.

In contrast, TECH offers an Internship Program where, during 3 weeks, the students will join a reference institution in Visual Analytics and Big Data to delve into the latest innovations in this field.

5. Expanding the boundaries of knowledge

With the aim of expanding the professional careers of graduates, TECH has reached agreements with prestigious international companies so that students can carry out their Internship Program in first class facilities. Therefore, students will have the opportunity to carry out their practical stay in a personalized way and without geographical limits.



You will have full practical immersion at the center of your choice"

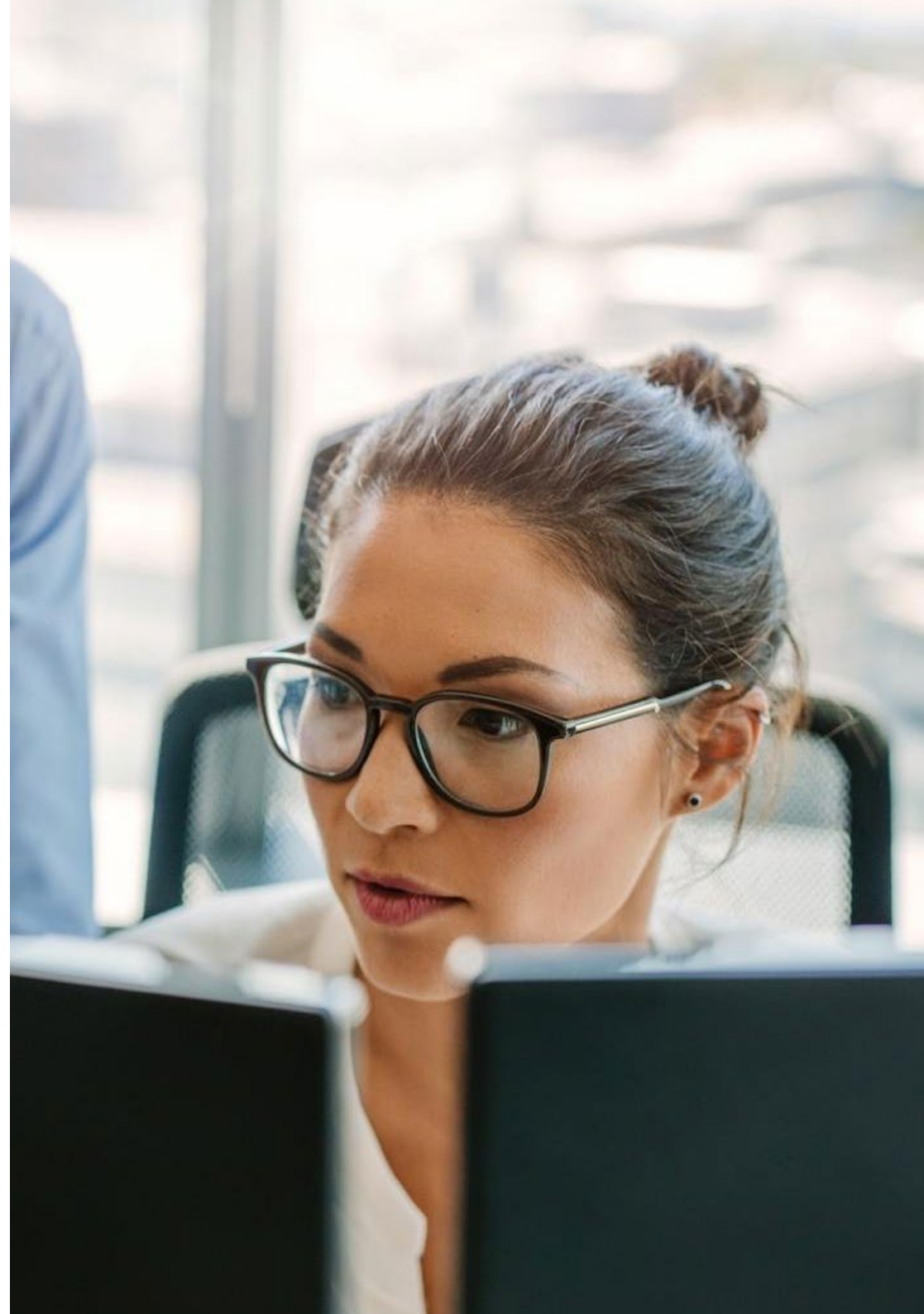
03 Objectives

Through this revolutionary Internship Program, professionals will have a thorough knowledge of the key technologies and tools used in Big Data and Visual Analytics. In this line, graduates will master programming languages such as Python, which will allow them to analyze data efficiently. At the same time, students will incorporate advanced Statistical and Machine Learning techniques into their daily practice to make predictions and detect patterns using advanced algorithms. In addition, students will be highly qualified to create effective data visualizations that facilitate the interpretation and communication of large volumes of data through interactive graphics and dashboards.



General Objectives

- Understand the value of the changing environment and facilitate the student's connection with entrepreneurship and new ways of working
- Analyze the data produced and draw conclusions using statistical tools to make the most appropriate decisions at all times
- Learn the introductory concepts of Statistics; reason statistically; represent relationships between different variables, etc.
- Develop skills in Big Data project management





Specific Objectives

- Design the joint strategy of statistical and artificial intelligence techniques for the development of descriptive and predictive systems applied to the reality of a data set
- Identify the techniques oriented to statistical analysis, Artificial Intelligence and massive data processing
- Know the environments most commonly used by Data Scientists
- Identify new technologies as pedagogical tools in the communication of the different business realities
- Know the latest trends in the creation of intelligent entities based on Deep Learning and neural networks
- Identify commercial and open software tools oriented to statistical analysis, artificial intelligence and mass data processing
- Know and develop the Drive profile applied to massive data environments
- Understand what and why advanced management skills generate differential value in data scientists
- Develop strategic communication and presentation techniques
- Be able to design a central intelligence system (CRM) for decision support based on data analysis and visualization, and focused on the company's own context
- Understand how patterns found in a data set can be made visible in order to generate a common interpretation of the underlying reality
- Know how to generate diagrams that visually represent the chosen situation from a set of data
- Be able to combine the different techniques studied for the design of original visualizations
- Design a system that combines data capture and storage techniques, as well as data analysis and visualization, to represent existing patterns in that data set



You will develop skills to apply Machine Learning methods to large data sets to gain valuable insights”

04 Educational Plan

The Internship Program in Visual Analytics and Big Data consists of a 3-week practical internship in a recognized entity, from Monday to Friday, with 8 consecutive hours of practical training with an assistant specialist. During this stay, the students will perform their tasks in a real work scenario, with the help of an experienced team of professionals in this field.

In this completely practical training proposal, the activities are aimed at developing and perfecting the skills necessary for the provision of data collection and customer acquisition services, and are oriented towards specific training for the exercise of the activity.

Undoubtedly, this is an excellent opportunity for the graduates to understand and integrate Mass Data Processing to the business environment, in a scenario that has specialists who will guide them and orient their development towards the new digital trends.

The practical teaching will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of teachers and other training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for the Programming praxis (learning to be and learning to relate to others).

The procedures described below will form the basis of the practical part of the training, and their implementation will be subject to the center's own availability and workload, the proposed activities being the following:



You will master the most sophisticated programming languages for data analysis and visualization”

Module	Practical Activity
Social and Technological Context of Visual Analytics	Understand the new 5G, IoT, Cloud and Edge Computing technologies
	Apply critical Thinking techniques in Visual Analytics
	Manage the different types of information processing
	Learn about random variables and probability distributions
	Implement the different applications of Bayesian inference
	Manage information by applying sampling theory
	Practice working with the range of values through the application of confidence intervals
Data Analytics and AI	Manage information through the use of method evaluation and method selection
	Integrate information through web analytics
	Evaluate the use of social networks
	Implement linear optimization techniques: graphical method and simple method
	Identify complex data patterns through Machine Learning
	Perform statistics through the Monte Carlo method
	Work on understanding, classifying and analyzing texts through Text Mining
Manage methods in Natural Language Processing (NLP)	

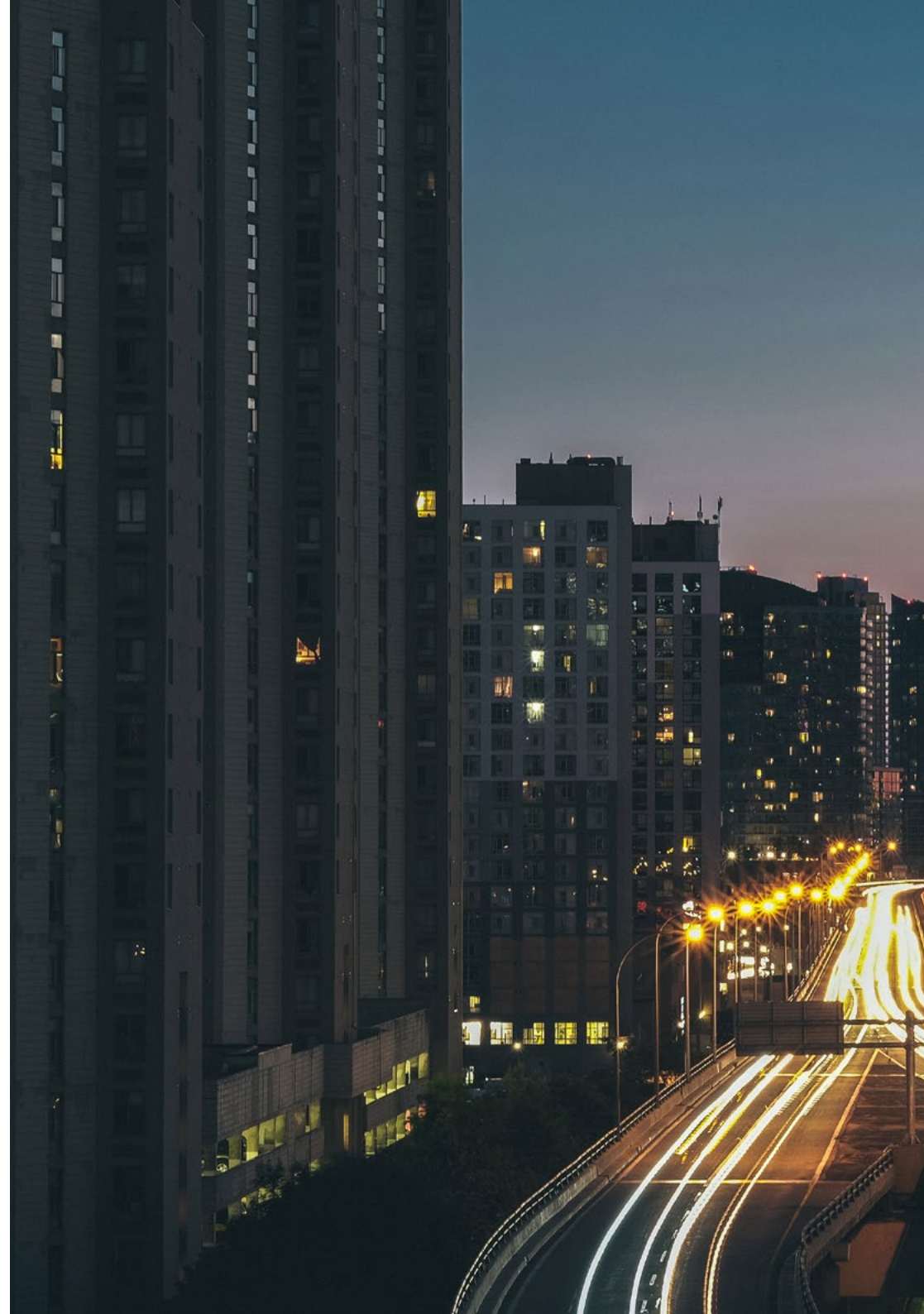
Module	Practical Activity
Data Analysis Tools and Database Management and Parallelization	Work on statistical analysis through the Data Science R environment
	Practice data analysis through Python
	Delve into the processing, cleaning, and preparation of data in different formats
	Elaborate a decision tree
	Apply classification and association rules
	Know the tools for ingesting large volumes of data
	Delve into the management of the Hadoop and Spark data processing system
Strategic Management of Visual Analytics and Big Data Projects and Use of Data-Driven Softskills	Work on the management of the Apache Kafka platform
	Manage the Cloudera Impala search engine
	Manage data for the optimization of strategic communication performance
	Practice advanced data-driven management skills
	Manage Kimball methodology
	Monitor and evaluate quality through the SQUID method
	Put into practice privacy issues in Big Data
Apply the best cybersecurity techniques in Big Data	

05 Where Can I Do the Internship Program?

In line with its firm commitment to provide first-class academic experiences, TECH has made an effort so that this Internship Program can be carried out in prestigious international institutions. Thanks to this, the graduates will join a work team made up of highly specialized experts in Visual Analytics and Big Data. Undoubtedly, an ideal opportunity for students to grow professionally alongside the best specialists in this field.

“

You will carry out your practical stay in a reference company in Visual Analytics and Big Data, where you will be surrounded by experts in this field”





The student will be able to do this program at the following centers:



School of Business

Captia Ingeniería

Country	City
Spain	Madrid

Address: Av. de las Nieves, 37, Bloque A Planta 1
Oficina E, 28935, Móstoles, Madrid

IT company dedicated to providing advanced technological solutions to industries.

Related internship programs:

- Visual Analytics and Big Data
- Software Development



Enroll now and advance in a practical way in your field of work"

06 General Conditions

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the trainees and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the Internship Program period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



General Conditions of the Internship Program

The general terms and conditions of the internship agreement for the program are as follows:

1. TUTOR: During the Internship Program, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor, whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Internship Program, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass the Internship Program will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: The Internship Program shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Internship Program. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Internship Program will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

07 Certificate

This private qualification will allow you to obtain an **Internship Program's diploma in Visual Analytics and Big Data** 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.

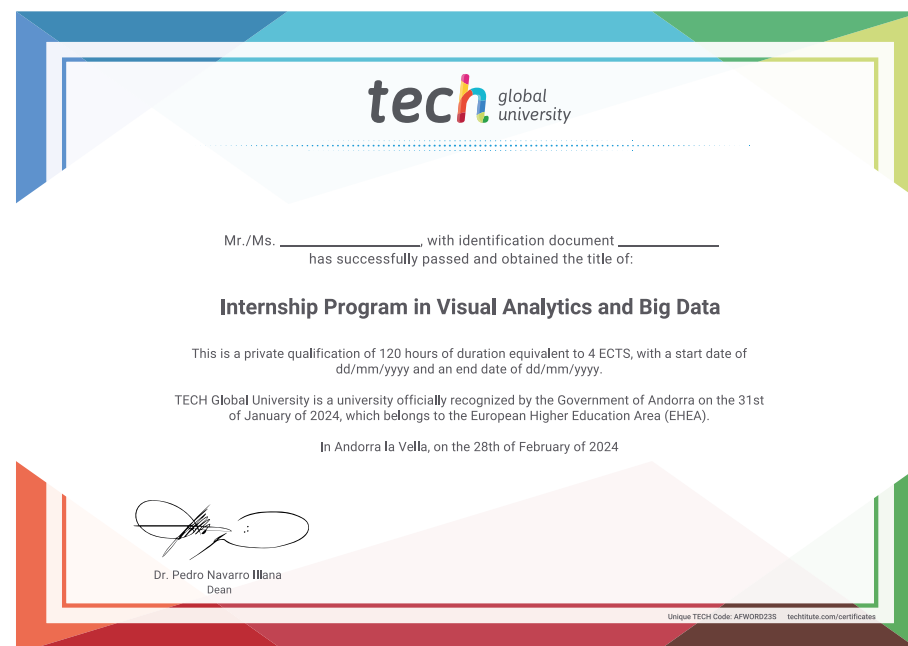
This **TECH Global University private qualification**, is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Internship Program in Visual Analytics and Big Data**

Duration: **3 weeks**

Attendance: **Monday to Friday, 8-hour consecutive shifts**

Accreditation: **4 ECTS**



future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
online training
development languages
virtual classroom



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