Internship Program
Visual Analytics and Big Data

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01
Introduction

Rational data analysis through visual and interactive interfaces has revolutionized the field of computer science. Thanks to the development of Visual Analytics, it is now possible to make decisions by combining human flexibility and creativity with the most innovative and complex information storage and processing processes, resulting in faster and more effective problem solving. For this reason, it is a service that is increasingly in demand in the business environment, which is why TECH has decided to focus a practical experience solely on its techniques. Through a 120-hour stay in a reference center, the graduate will be able to actively delve into the use of these strategies, enhancing their talent to the maximum and side by side with the best experts in the sector.

A program thanks to which you will be able to intervene in the visualization of information through the exhaustive mastery of graphics that you will obtain with this Internship Program"

Big Data and the opportunities offered by data warehousing is crucial for companies and public agencies to solve problems and achieve goals. One of them is to reach the target audience and have them feed back that communication. This development is directly influenced by the application of novel data recording techniques such as statistical analysis and data parallelization. In this way, massive data can be processed in all areas: political, health and commercial. For the proper development of these trends in full digital transformation, companies must have trained professionals to develop the strategic direction focused on Visual Analytics, business communication systems and, ultimately, the role of Data Scientist. For this reason, TECH has developed a program, which offers an intensive specialization, thanks to which you will update your skills in your own field of activity, carrying out a practical period of 3 weeks in prestigious IT companies.

New trends in digitalization only look to the future and current and emerging companies must adapt to it if they do not want to be left behind. One of the most powerful tools in this regard is data processing. Marketing becomes much more direct when you offer the user a product related to their interests. That's when Big Data comes in. This system is present in RRSS, in clinical records, in mobile applications with geolocation and, in general, in much of life. For this reason, the specialists of the future must know and master all the ins and outs of data collection and its benefits in terms of results.

TECH offers an Internship Program in a prestigious advertising agency, which puts Big Data into practice in its own and external Marketing. Thanks to the 3-week training, in which students will be supported by experts already working in the field, they will be able to understand the keys to communication and business strategies. This practical period will include the latest technological tools for the design of data capture and storage systems. All this, so that the professional of tomorrow knows how to act ethically in the face of the demand of companies that wish to digitize their marketing, among other aspects.

Through this program you will be able to do an internship in a prestigious organization that incorporates the latest technology in data visualization and analysis"

02
Why Study an Internship Program?

IT in general terms has experienced exponential growth over the last 20 years driven by the advancement of new technologies and IoT. Thanks to this, it has been possible to develop strategies such as those related to Visual Analytics and Big Data, which allow the development of massive data in a fast, simple and effective way. And it is precisely in this context that the Internship Program is focused, a pioneering program that offers graduates the opportunity to take an unparalleled internship in a leading international IT center.

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During the practical stay you will work on the various methods used in data analysis, as well as their pros and cons depending on the context"

1. Updating from the latest technology available
The center where the Internship Program will take place is equipped with the most innovative computer equipment. In this way, the graduate will be able to access it and work on its use, culminating the experience having mastered its use, an aspect that can be highlighted in their résumé.

2. Gaining In-Depth Knowledge from the Experience of Top Specialists
TECH guarantees that the graduate will be accompanied at the highest level. A specialist from the company where the internship will take place will guide you during your stay, in order to ensure that all the objectives for which this experience was designed are met. In addition, they will be at your disposal to solve any doubt or inconvenience that may arise during the 3 weeks.

3. Entering first-class Management environments
TECH's selection process regarding the companies that are part of the internship destinations is long, since they must prove that they meet all the requirements to be an ideal center to improve the practice of the graduates. Therefore, students who decide to take this Internship Program will have guaranteed access to the best technological resources.

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

All the concepts and strategies that are worked on during the internships are perfectly applicable to any environment related to Visual Analytics and Big Data. This is because TECH places special emphasis on this, so that any graduate who decides on this program does not have to worry about the incompatibility of their strategies and can enjoy the experience to the fullest.

5. Expanding the Boundaries of Knowledge

TECH offers the possibility of doing this Internship Program, not only in national, but also in international centers. This way, the specialist will be able to expand their frontiers and catch up with the best professionals, who practice in first class centers and in different continents. A unique opportunity that only TECH, the largest online university in the world, could offer.

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

03
Objectives

The main objective of this program is the correct experimental instruction of the graduate in Computer Science and Marketing, among other disciplines. This is an exclusively practical academic mode in which students will develop their professional career and apply their knowledge in Visual Analytics and Big Data in a real environment. In addition, students are supported by experts attached to the company where they will carry out their internships and learn from their experience as Data Scientists.

General Objectives

- Understand the value of the changing environment and facilitate students' connection to entrepreneurship and new *knowmad* ways of working
- Analyze the data produced and draw conclusions using statistical tools to make the most appropriate decisions at all times
- Learning the introductory concepts of statistics; statistical reasoning; representing relationships between different variables, etc

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 techniques oriented to statistical analysis, Artificial Intelligence and massive data processing
- Know the environments most 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 they are and why advanced management skills generate differential value in the data scientist
- 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
- Know how to generate diagrams from a set of data that visually represent the chosen situation

- 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

With this practical period you will master the application of AI algorithms and techniques, such as decision trees, classification rules and Deep Learning"

04
Educational Plan

The Internship Program in Visual Analytics and Big Data will take place during 3 weeks of comprehensive internships that will introduce the specialist to their field of expertise. The 8-hour consecutive days are scheduled from Monday to Friday with the support of an in-house adjunct expert. In this way, the user of the Internship Program will be able to perform field work in situ, with real customer demands and the design of data capture and storage techniques systems.

In this training proposal, which is completely practical in nature, 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.

TECH has designed the practical teaching so that the student performs the work of the Data Scientist, meeting the demands of the industry from an active role. The student will deal with the creation of intelligent entities based on Deep Learning and neural networks; commercial and free software tools oriented to statistical analysis, as well as new technologies as pedagogical tools in the communication of different business realities, among other issues.

The tutor in question, who will accompany each student in the company, will train them to design a central intelligence system (CRM), in order to support decisions based on data analysis and visualization and focusing on the company's own context, among other competencies. This is the best way to understand and integrate the massive data processing to the business environment and in a scenario that has experts who will guide the specialist and their development towards 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 to facilitate teamwork and multidisciplinary integration as transversal competencies for the programming praxis (learning to be and learning to relate).

The procedures described below will be 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:

Receive specialized education in an institution that can offer you all these possibilities, with an innovative academic program and a human team that will help you develop your full potential"

Module	Practical Activity
Social and technological context of Visual Analytics (data analysis and interpretation)	Learn about the new 5G, IoT, Cloud and Edge Computing technologies
	Apply Critical Thinking techniques in Visual Analytics
	Managing the different types of information processing
	Knowledge of random variables and probability distributions
	Put into practice the different applications of Bayesian inference
	Manage information by applying sample theory
	Practice working with the range of values through the application of confidence intervals. confidence intervals
Data analysis and AI	Manage information through the use of evaluation techniques and method selection. of methods
	Integrating information through web analytics
	Evaluate the use of social networks
	Implement linear optimization techniques: graphical method and simple method
	Identifying complex data patterns through Machine Learning
	Perform a statistic through the Monte Carlo method
	Work on text comprehension, classification and analysis through Text Mining
	Manage methods in natural language processing (NLP)
Knowledge of data analysis tools and database management and parallelization systems	Work on statistical analysis through the Data Science R environment
	Practicing data analysis through Python
	In-depth processing, cleaning, and preparation of data in different formats
	Elaborate a decision tree
	Apply the rules of classification and association
	Know the tools for ingesting large volumes of data
	Delve into Hadoop and Spark data processing system management
	Work on the management of the Apache Kafka platform
	Manage the Cloudera Impala search engine
Strategic management of Visual Analytics and Big Data projects and use of Data-Driven Softskills	Manage data to optimize strategic communication performance
	Practice advanced management skills in Data-Driven
	Manage the Kimball methodology
	Monitor and evaluate quality through the SQUID method
	Put privacy issues into practice in Big Data
	Apply the best cybersecurity techniques in Big Data

Where Can I Do the Internship Program?

To develop this Internship Program, TECH has turned to an advertising agency, which develops the Marketing of other organizations through Big Data. The practical period is distributed in 8-hour days from Monday to Friday for 3 weeks. Throughout this internship, the specialists will be assisted by expert tutors to carry out their duties as Data Scientist. All this, backed by a second opinion and technical instructions that guarantee an adequate praxis for each patient. A practical experience that will provide the professional with the keys in programming, mathematics and statistics to collect, extract and process relevant information.

Project your career with an enriching internship in a renowned agency, where you will apply the latest technological advances in Data"

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

information-technology

EPA Digital

Country	City
Mexico	Mexico City

Address: Avenida Ejército Nacional 418 piso 9 Polanco V Sección CDMX C.P 11520

Digital Marketing and Communication Agency

Related internship programs:
- Visual Analytics and Big Data
- MBA in Digital Marketing

information-technology

Grupo Fórmula

Country	City
Mexico	Mexico City

Address: Cda. San Isidro 44, Reforma Soc, Miguel Hidalgo, 11650 Ciudad de México, CDMX

Leading company in multimedia communication and content generation

Related internship programs:
Graphic Design
People Management

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 educational entity undertakes to take out civil liability insurance to cover any eventuality that may arise during the stay at the internship center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training 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 program agreement shall be 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 program will allow you to obtain your **Internship Program 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.
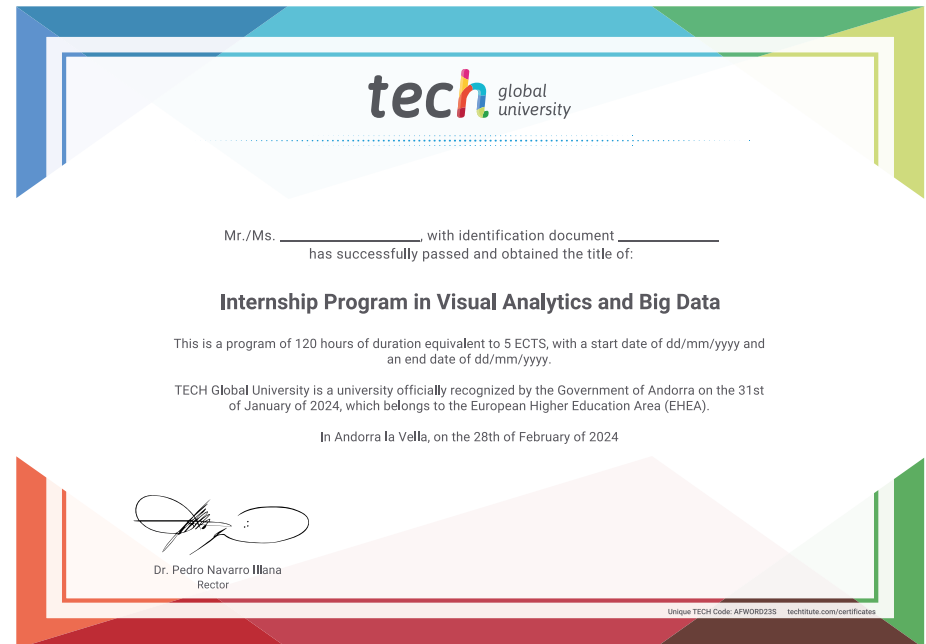
This **TECH Global University** title is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

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

Duration: **3 weeks**

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

Accreditation: **5 ECTS**

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

Internship Program in Visual Analytics and Big Data

This is a program of 120 hours of duration equivalent to 5 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

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