

Internship Program

Data Science Management (DSO, Data Science Officer)



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Index

01

Introduction

p. 4

02

Why Study an
Internship Program?

p. 6

03

Objectives

p. 8

04

Educational Plan

p. 10

05

Where Can I Do the
Internship Program?

p. 12

06

General Conditions

p. 14

07

Certificate

p. 16

01 Introduction

Nowadays, the optimization of processes linked to the reduction of time when processing massive amounts of information has become a strategy in great demand by the business sector. Therefore, Data Science Management has revolutionized classical data analysis, through the design of increasingly useful and effective predictive and profitability models, Machine Learning and task management and automation. For this reason, and in view of the countless advances that are made in this area every year, TECH has decided to launch an eminently practical program that allows graduates to work in situ alongside professionals in this sector during a 120-hour internship in their centers. In this way, they will be able to get up-to-date on all their issues by actively participating in the handling of cases related to this area.



The experts who will accompany you during internship will provide you with the best tools to collect, maintain and analyze data based on industry developments"





The proliferation of new technologies has given way to the generation of data on the Internet at a global level. Digitalization has developed, in turn, a new technological context that offers great advantages by applying AI and Big Data, among other techniques. However, this profound change has also been a challenge for companies, as they have had to adapt to the new paradigm of data analysis. Therefore, in order to make strategic decisions that maximize profits for public and private organizations, today's market depends on highly qualified professionals. For this reason, TECH offers a practical program that, in just 3 weeks, will provide specialists with innovative tools to carry out the role of Data Science Officer. A unique opportunity for professionals in the sector to increase their skills during internships in prestigious companies.

The management of marketing, sales and finance projects, and even product innovation, is directly related to the role of the Data Science Officer. Nowadays, this figure is in great demand, as it is the one who will study the company's environment in order to promote its field of action and intensify its sales strategies. All this is achieved through Data Analytics techniques, Business Intelligence tools and the management of Big Data on a large scale.

TECH offers an Internship Program in a prestigious advertising agency. Thanks to this 3-week period, students will develop their role as DSO. Moreover, the specialists will not be alone, since during their internship, they will have an assistant tutor in the company itself to guide them and point out the successes and mistakes in their intervention. In this way, the student will have all the latest technological tools, such as Cloud Platforms for IoT, to significantly improve their skills. In short, the professional who develops this role, must be a figure with knowledge in Artificial Intelligence and who has an ambitious approach in the digital career within the business network.

02

Why Study an Internship Program?

This Internship Program will allow the graduate to delve into the latest developments in Data Science Management through an internship of 120 hours in a professional center of reference. Thanks to this, they will have access to the most comprehensive information technology and the best resources to work on perfecting their skills in just 3 weeks. TECH guarantees the specialist that this program is the best option if they are looking to make a difference in their professional career.



You will become a renowned data forecasting professional thanks to the knowledge and absolute mastery of Data Science that you will gain with this Internship Program"

1. Updating from the Latest Technology Available

Any of the centers in which the graduate completes the Internship Program will have the most advanced and innovative computer technology. In this way, they will be able to work on its exhaustive use, as well as on the mastery of its techniques. An asset that can be included in your resume as an outstanding skill, something that will undoubtedly serve to make a difference in any personnel selection process.

2. Gaining In-depth Knowledge from the Experience of Top Specialists

Thanks to the guided accompaniment that the graduate will receive during the 3 weeks of internship, they will be able to get the most out of the academic experience. In addition, they will have the opportunity to benefit from the experience of these professionals, who have a long and extensive experience in the use of Data Science Management as a star strategy in the effective and efficient management of data.

3. Entering first-class environments

The course of this program will allow the graduate to enter a first-class practical environment by actively participating in the work that comes to the company during the Internship Program. In this way, they will be able to apply their knowledge and understand which strategies are most effective, while observing how their colleagues work in order to improve their skills based on their recommendations.



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

Everything the graduate learns during internships can be perfectly applicable to any IT or business environment related to Data Science Management. In this way, they will have the security and guarantee of updating their knowledge based on internationally standardized information, promoting their professional quality and opening more doors in the labor market.

5. Expanding the Boundaries of Knowledge

TECH has agreements with international companies. Thanks to this, the graduate can decide where to carry out their practical period through a wide range of entities. Therefore, if you wish to expand your experience beyond the borders of your country, you can choose to carry out your internship anywhere in the world, giving way to an unparalleled professional and personal opportunity.

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

03

Objetivos

The main objective of this program is to instruct the enrolled students in the management of Big Data and its analysis in business development. This is an exclusively practical academic modality, with which the professional will be able to put into practice all his knowledge as a Data Science Officer. In this way, and thanks to the guidance of the adjunct tutor, they will see their skills increase, which will improve their professional career with guarantees. In addition, the specialist will explore techniques for analysis, data exploitation and visualization and interaction techniques, all closely linked to the role of Data Scientist.



General Objectives

- ♦ Analyze the benefits of applying data analytics techniques in each department of the company
- ♦ Develop the basis for understanding the needs and applications of each department
- ♦ Generate specialized knowledge to select the right tool
- ♦ Propose techniques and objectives in order to be as productive as possible according to the department





Specific Objectives

- Determine the creation of scorecards and kpi's according to the department
- Generate specialized knowledge to develop predictive analytics
- Propose business and loyalty plans based on market research
- Apply statistical, quantitative and technical knowledge in real situations
- Determine the best practices for data management according to its typology and uses
- Establish data access and reuse policies
- Ensure security and availability: information availability, integrity and confidentiality
- Examine data management tools using programming languages
- Identificar qué es IoT (Internet of Things) e IIoT (Industrial Internet of Things)
- Examine the different Cloud platforms in IoT: General Purpose, Industrial, Open Source
- Determine the main features of a Dataset, its structure, components and the implications of its distribution in modeling
- Develop skills to solve practical cases using data science techniques
- Establish the most appropriate general tools and methods for modeling each Dataset based on the preprocessing performed
- Demonstrate critical analysis of the results obtained after applying preprocessing or modeling methods
- Implement algorithms used for data preprocessing
- Demonstrate the ability to interpret data visualization for descriptive analysis
- Develop advanced knowledge of the different existing data preparation techniques for data cleaning, normalization and transformation
- Apply dynamic regression models and apply the methodology for the construction of such models from observed series
- Address the spectral analysis of univariate time series, as well as the fundamentals related to periodogram-based inference and interpretation
- Estimate the probability and trend in time series for a given time horizon



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 Data Science Management will be developed during 3 weeks of comprehensive internships that will introduce the specialists to their field of action. This period includes an internship in a company dedicated to Branding and Marketing, based on the results of data analysis. The 8 consecutive 8-hour days are distributed from Monday to Friday with the support of an assistant expert who will guide the students. In this way, the student of the Internship Program will be able to develop the DSO function in situ and under real experiences.

In this internship 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 qualification 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 sector from an active role. In this way, the student will investigate data analytics in the business organization and graphical representation for data analysis. All this, using new technologies as pedagogical tools in the development of their activities within the Data sector itself.

In addition, students will be accompanied by an assistant tutor, who will guide them towards the development of analytical skills to make quality decisions. The purpose of this program is to update the knowledge of professionals who are already working in the Data sector and, in addition, to increase the experience of those who have not yet joined the labor market in this field. It is about the best way to integrate data processing into business performance and the best practices for data management according to its typology and uses.

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 support and guidance of professors and other training partners that facilitate teamwork and multidisciplinary integration as transversal Programming (learning to be and learning to relate).



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"



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:

Module	Practical Activity
Managing IoT devices and platforms as a basis for data science	Manage IoT sensors and devices
	Work with OSI model protocols
	Work with Cloud platforms for IoT and IIoT
	Delve into data management models using open data
	Implementing IIoT security strategies
	Develop IoRT protocols (Internet of Robotics Things)
Use of data science tools	Carry out data analysis in different contexts
	Learn in detail the types of analysis through practice
	Use the extraction of information from a Dataset
	Approach the Dataset from its base to its exhaustive handling
	Implement the balancing in the Dataset
Design and development of intelligent systems and data-intensive systems and architectures	Work in data processing and transformation
	Use classification algorithms
	Implement the main strategies of linear regression, logistic regression and nonlinear models
	Implement bagging algorithms
	Work in relational, document and network models
	Use databases for data storage and retrieval management
	Learn data coding formats in detail
Practical Application of Data Science in Sectors of business activity	Practical application of data science in various business sectors
	Approach to the various phases and elements of data analytics
	Development of data analytics applied to a department within the enterprise
	Approach to different cases through strategies, prediction and campaign management
	Mastering time series
	Learn in detail about time series schemes
	Apply basic forecast methods
	Understand residuals analysis

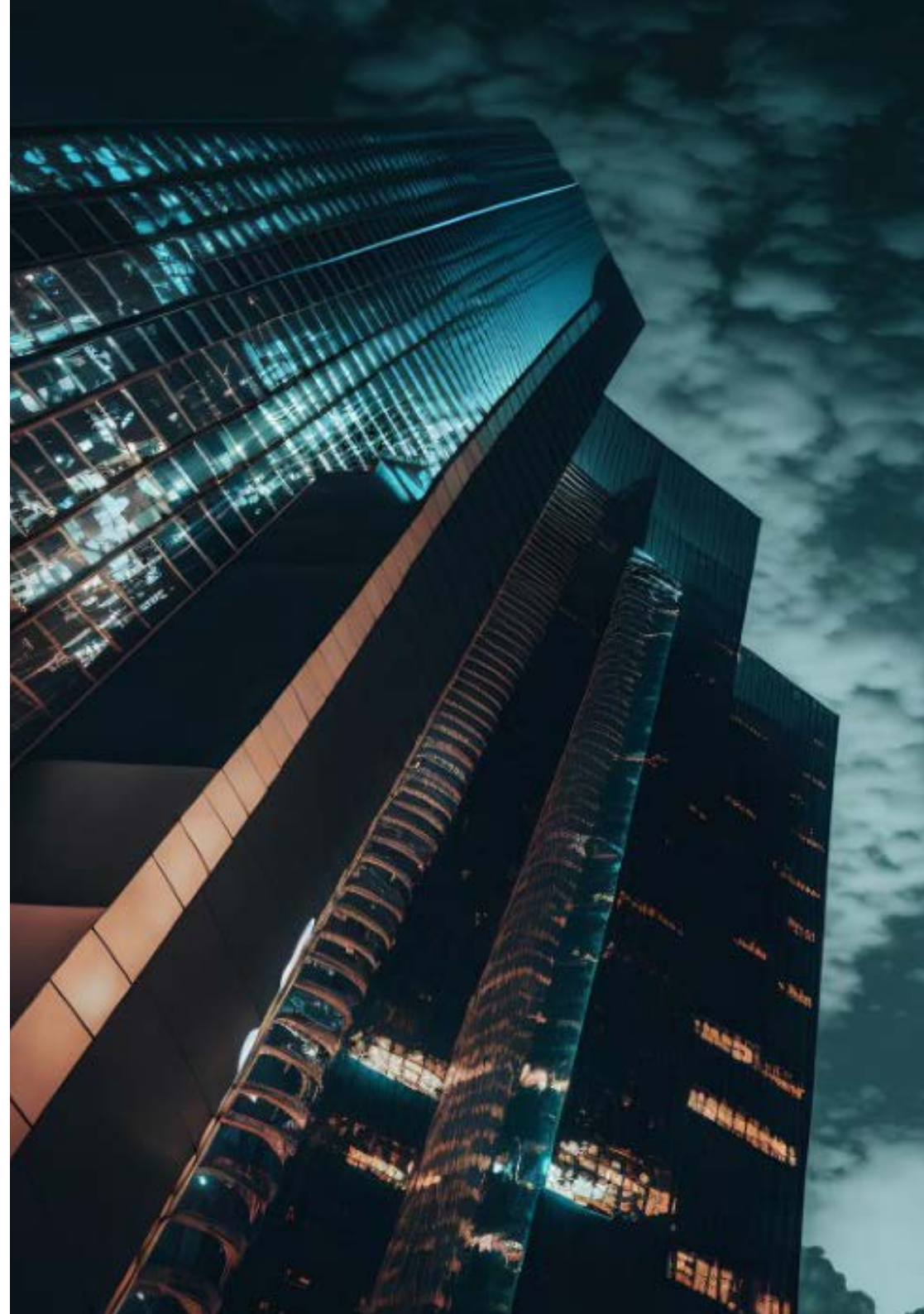
05

Where Can I Do the Internship Program?

TECH has chosen a prestigious center for students to carry out their Internship Program. This 3-week internship has the instructive endorsement, given the long trajectory of the companies in question. The practical period is distributed in days from Monday to Friday and of 8 exhaustive hours, in which the student will have the support of an assistant tutor. This is an alternative to conventional programs, since in this instruction, the student will be able to reflect their knowledge in practice and, above all, prepare themselves to act individually, and in teams, in the workplace.



Project your career with an enriching internship that will provide you with software tools to perform graphing and exploratory data analysis"





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



Information Technology

EPA Digital

Country

Mexico

City

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

Mexico

City

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

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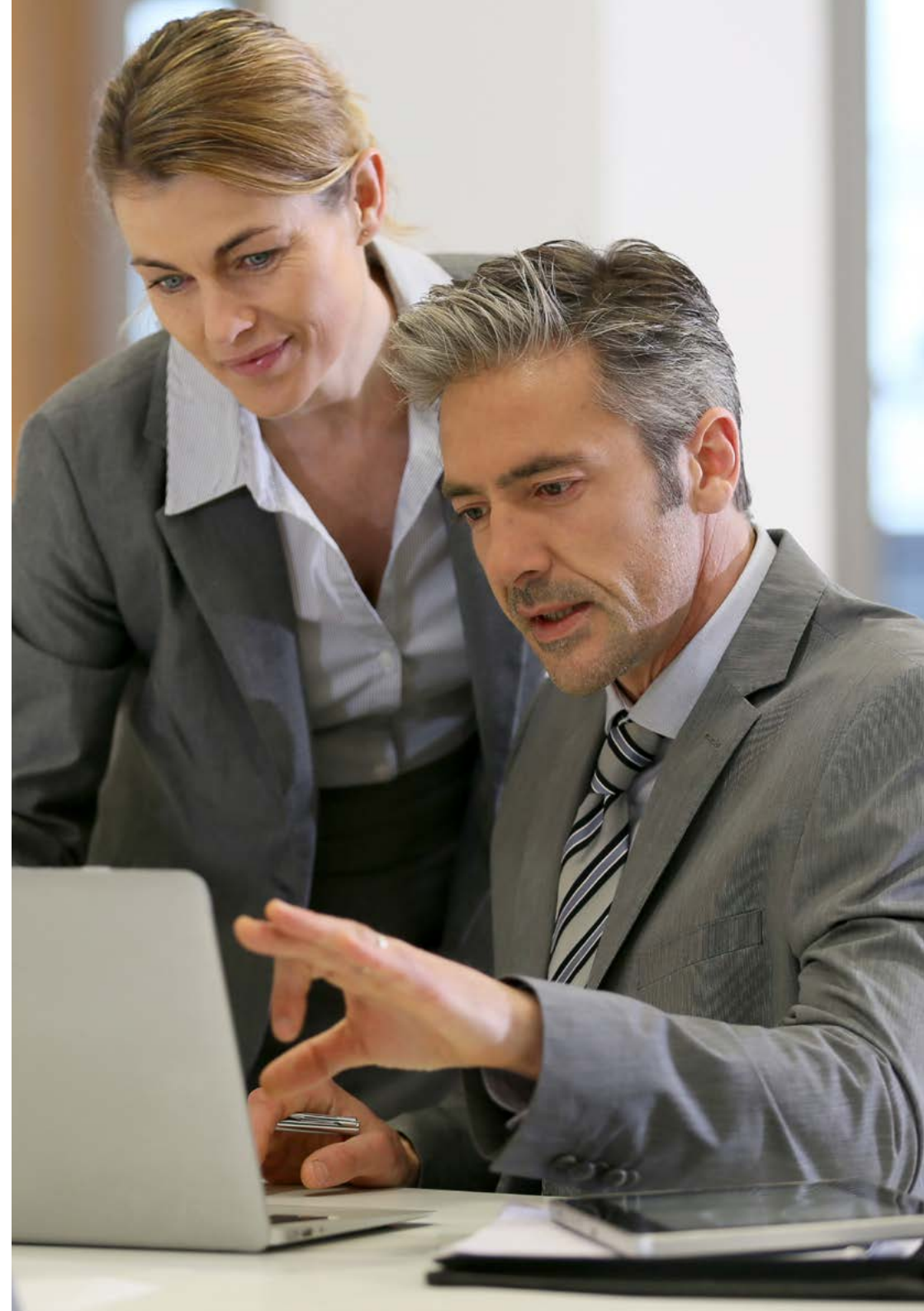
General Conditions

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 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 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 **Internship Program in Data Science Management (DSO, Data Science Officer)** contains the most complete and up-to-date program on the professional and academic scene.

After the student has passed the evaluations, they will receive their corresponding TECH Internship Program issued by TECH Technological University via tracked delivery*.

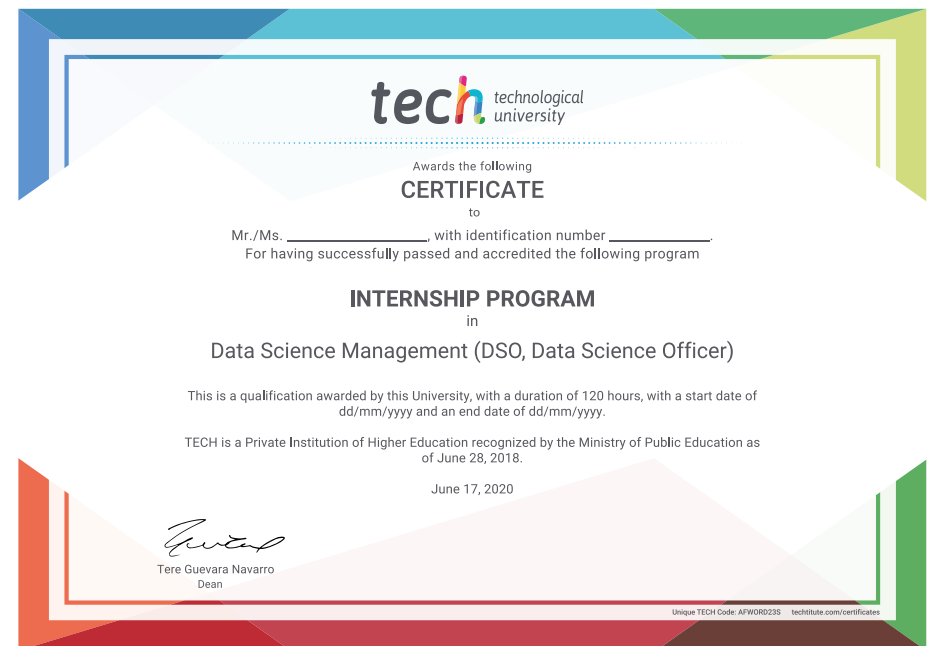
The certificate issued by TECH will reflect the grade obtained in the test.

Title: **Internship Program in Data Science Management (DSO, Data Science Officer)**

Duration: **3 weeks**

Course Modality: **Monday to Friday, 8-hour consecutive shifts**

Total Hours: **120 h. of professional practice**





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