Internship Program
Web Application and Service Development

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01
Introduction

With the advent of Industry 4.0, IT and communication have become fundamental pillars within companies. In this sense, Application Development with web technologies is a powerful tool for institutions to reach a global audience and offer their goods or services through the Internet. In this way, organizations increase both their visibility and reach, facilitating interaction with potential customers regardless of their geographic location. In this scenario, TECH creates this program, in which in 3 weeks students will join a team versed in this area to get up to date with the latest advances in Web Application User Management and apply them to their work practice.

Through this Internship Program, you will gain the skills to create the most engaging user interfaces to improve the user experience when interacting with web applications"

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A recent report by a prestigious consulting firm reveals that one of the job profiles most in demand by companies is that of Web Applications and Services Developer. The reason is that, in the midst of the digital era, organizations need to have a solid online presence to increase their visibility in the job market and establish a positive reputation among potential users. In order to take advantage of this opportunity, computer scientists need to acquire a competitive advantage that differentiates them from other candidates and captures the interest of companies.

To support developers with this task, TECH is launching an Internship Program in Web Application and Service Development consisting of a 120-hour on-site stay. In this way, during 3 weeks, the graduates will join a work team made up of real IT professionals. Together with these experts, students will work actively in the design of web architectures, as well as in other fields such as cloud services or implementation of security measures on websites. This will enable students to acquire new skills to optimize their professional practice and thus offer services of excellent quality. They will also be aware of the reality of the labor market and will implement highly innovative proposals to capture the attention of users.

During their internship, graduates will be supported by an assistant tutor who will be in charge of guiding them and answering any questions they may have. Thanks to this, graduates will enjoy a successful apprenticeship that will serve to expand their professional prospects. In this way, they will be highly prepared to make the leap to the most prestigious technological institutions and provide creative IT proposals.

02
Why Study an Internship Program?

Web Application and Service Development is a constantly growing field, with a high demand for skilled professionals due to the increasing reliance on web technology in all sectors of industry. For this reason, more and more organizations are demanding the incorporation of highly qualified computer scientists in this field. Faced with this situation, TECH designs a disruptive academic product in the current educational landscape. Students will enter a prestigious institution to put into practice the latest procedures in the creation of online applications and services. In this way, during 3 intensive weeks, the graduates will join a multidisciplinary work team to build advanced web applications. Undoubtedly, a unique opportunity for students to enjoy learning with real utility and adapted to the needs of today's labor market.

TECH offers you the opportunity to join a prestigious company to delve, with the help of the best experts, into the latest trends in Web Application Security"

1. Updating from the latest technology available

The implementation of new technologies in the IT field has allowed developers to create, test and deploy web applications efficiently. An example of this are programming languages and frameworks, which enable the creation of more interactive user interfaces. In order to bring these tools closer to the specialists, TECH presents this Internship Program for students to enter a cutting-edge work environment, where they will have access to the latest technology in the field of Web Application and Service Development.

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

Throughout the entire practical period, students will be supported by a team of highly specialized IT professionals. These experts will help students to make the most of their stay at the institution, while at the same time passing on the latest developments in Web Application User Management. In the same vein, a specifically appointed tutor will guide students during this Internship Program and provide them with personalized advice to ensure learning success.

3. Entering first-class professional environments

TECH's main premise is to provide academic itineraries of excellent quality, which is why it rigorously chooses the companies where students will carry out their Internship Program. In this way, graduates will have access to renowned institutions to work professionally. There they will have at their disposal the necessary technological tools to carry out their work and will enjoy state-of-the-art environments.

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

TECH designs its university programs based on the demands and requirements of the current labor market. For this reason, it offers a 100% practical learning model so that students can apply their theoretical knowledge in real, practical situations. In this way, students develop technical skills that are essential for the IT profession. In addition, active practice promotes creativity and innovation by providing students with the freedom to explore different approaches to work in a controlled and supportive environment.

5. Expanding the boundaries of knowledge

TECH has made a great effort so that this Internship Program can be carried out in a variety of international reference institutions. This allows specialists to expand their frontiers and get up to date in the field of Application Development and Web Services with the best professionals in this sector. Therefore, graduates will acquire skills that will enable them to excel in a field that is in high demand by technology companies.

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

03
Objectives

Thanks to this university program, computer scientists will acquire the technical skills required to effectively design, develop and maintain web applications or services. In this sense, graduates will adequately handle modern tools such as the main programming languages (such as JavaScript), frameworks and databases. In this way, developers will create effective and attractive user interfaces. At the same time, experts will be able to implement security measures in website development, including protection against common vulnerabilities.

General Objectives

- Address the development of the back-end part of the web application, reviewing available technologies, integration mechanisms such as APIs, message and event queues, and deployment and optimization processes
- Develop the necessary steps for the creation of the Front-end of the web application, taking into account programming aspects as well as accessibility requirements, multi-language and multi-platform support
- Create personalized experiences, monitor and monetize the use of the web
- Consolidate good practices in application design and development with project management that supports continuous iteration, integration and deployment

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- To analyze the aspects related to the security of web applications in depth, with a special focus on the most common attacks and the corresponding prevention, detection, and mitigation mechanisms
- Review safety recommendations and regulations
- Addressing security as one of the pillars of advanced web architectures
- Establish cloud computing as a growing alternative for the development and deployment of web applications
- Review key features and suppliers, planning migration scenarios and incorporating new roles and processes in project management
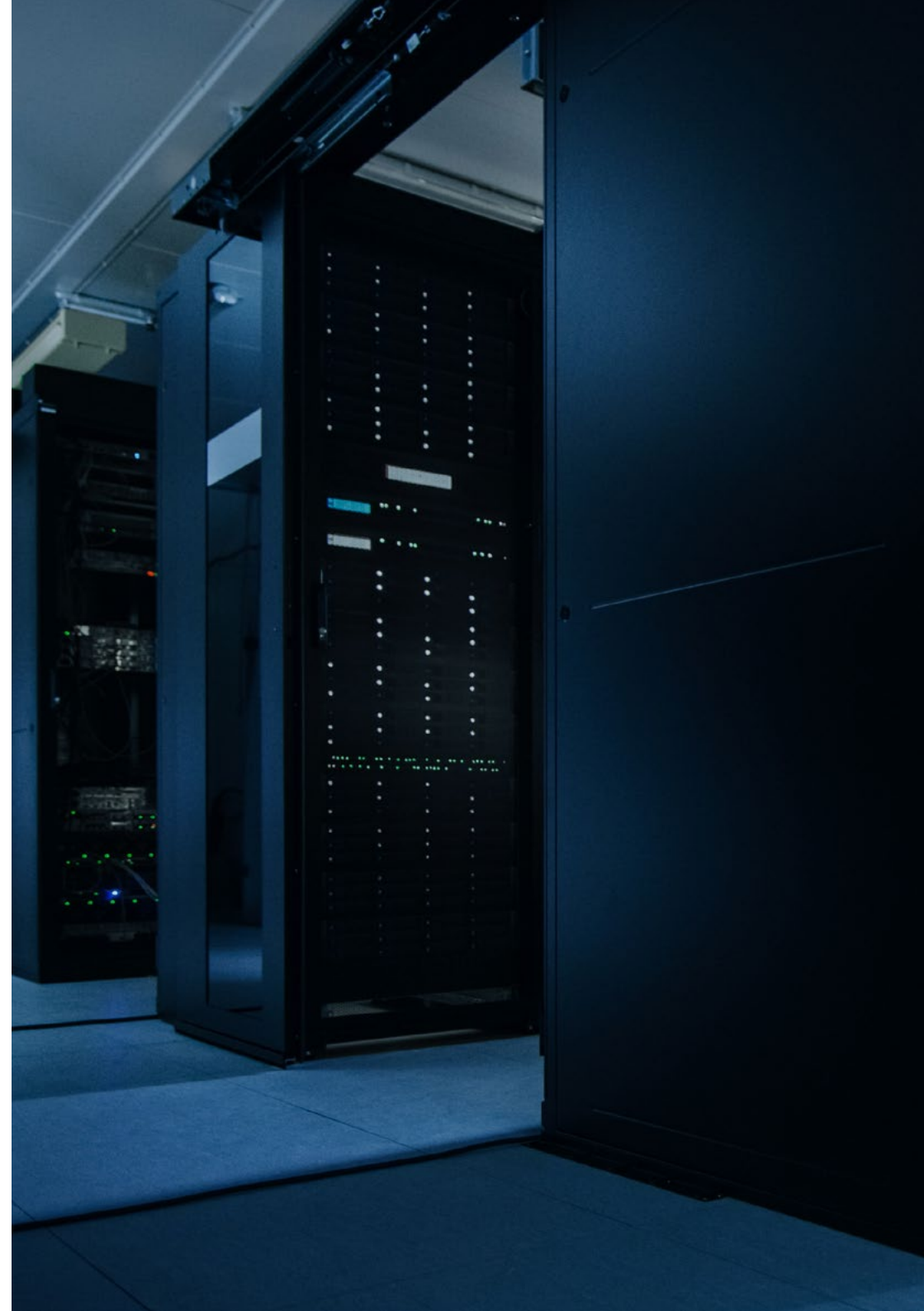
" *You will enhance your skills to generate highly personalized user experiences in advanced web applications"*

Specific Objectives

- Analyze real web application and service architectures for reference
- Delve into the design of web architectures following good practices
- Design advanced user experiences with multi-platform support
- Apply accessibility criteria and multi-language support
- Develop application interfaces (APIs) of various types
- Examine the latest trends in application development
- Develop advanced architectures for processing large amounts of data
  Generate specialized knowledge in the use cases and tools of file storage
  and tools of file storage
- Delve into the regulation and good practices of data protection.
- Develop mechanisms and solutions for code version control
- Identify and apply cost optimization mechanisms in the cloud
- Determine how to design fault-tolerant architectures
- Establish web industry security recommendations and regulations
- Validate the advantages of resiliency and observability-oriented design
- Assimilate Chaos Engineering strategies to specialize and prepare teams

"

You will achieve your professional goals with this unique program that provides you with the latest knowledge in the sector, through progressive teaching and immediate application to your practice"
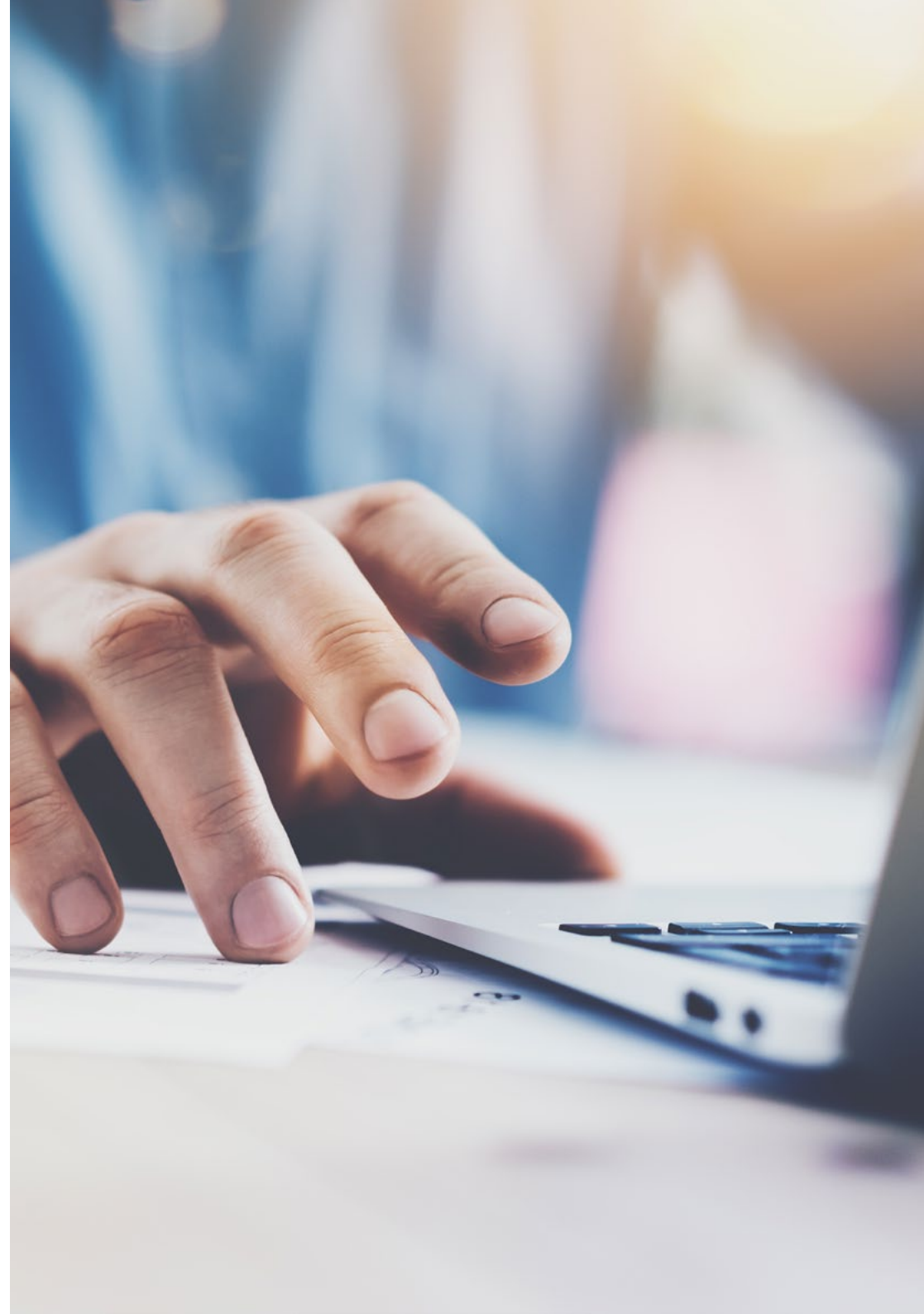
04
Educational Plan

The Internship Program in Web Application and Service Development consists of a practical stay in a prestigious center, lasting 3 weeks, from Monday to Friday with 8 consecutive hours of practical learning, alongside an assistant specialist. This experience will allow graduates to join a multidisciplinary work team, where they will build advanced web applications and provide web services in the cloud.

In this training proposal, of a completely practical nature, the activities are aimed at developing and perfecting the necessary skills for the provision of Web Application and Service Development require a high level of qualification, and are oriented towards specific learning for the exercise of the activity.

Students have an ideal opportunity to learn by working in one of the leading technological institutions, accompanied by a group of specialists in this area of computer science. These experts will teach students the latest techniques for load optimization, as well as the most sophisticated strategies for encryption.

The practical education 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 learning partners that facilitate teamwork and multidisciplinary integration as transversal competencies for Web Services and Applications Development praxis (learning to be and learning to relate).

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

Module	Practical Activity
User Interface Design	Elaborate visual elements such as buttons, menus, forms and other components of Front-End development.
	Create the basic structure of the web page using HTML, defining the hierarchy and layout of the elements.
	Develop interactive functionalities such as animations, scrolling effects or form validations
	Perform testing to ensure that the user interface works correctly on different web browsers and devices
Manage Data Persistence	Generate the structure and relationships of the information to be stored in the database
	Select the most appropriate storage technology for the needs of the application
	Configure the data access layers that allow the application to interact with the database
	Implement transaction control mechanisms to ensure data consistency and data integration during write operations
User and Session Control	Verify user identity through login credentials such as user name and passwords
	Define roles for users and allow them to have appropriate access to application functionality to application functionalities according to their authorization level
	Create a mechanism for users to reset their password in case they forget it.
	Monitor users' activities within the application in order to detect anomalous behaviors or identify trends

Module	Practical Activity
Security in Web Architectures	Assess potential vulnerabilities and threats to web application security, taking into account both the operational context and critical assets
	Conduct controlled penetration tests to simulate hacker attacks and measure the application's resistance to intrusions
	Implement encryption techniques to protect the sensitivity of sensitive data during storage and transmission
	Properly tune the web server and its components to mitigate security risks such as malicious code execution
Cloud Solutions	Design web applications that take advantage of cloud benefits, such as scalability or global availability
	Transfer existing applications to cloud environments to take full advantage of elasticity and cost reductions
	Deploy services in the cloud using deployment platforms and automation tools
	Execute data backup and recovery strategies to protect against data loss

You will develop your Internship Program in an institution at the forefront of technology, where you will be accompanied by a group of experienced professionals in this field"

05
Where Can I Do the Internship Program?

In its commitment to provide quality education within the reach of most people, TECH expands the academic horizons of students so that this Internship Program can be taught in various companies of international prestige. In this way, graduates have the opportunity to grow professionally alongside the best specialists in the field of Web Application and Service Development.

"
You will spend your practical stay in an institution of maximum reference and you will apply everything you have learned from the hand of the best experts in the sector"

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

IT specialist

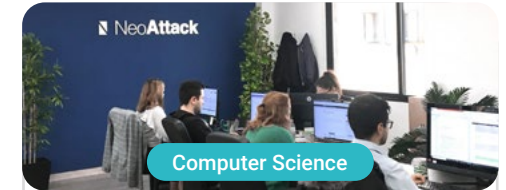## Ogilvy Barcelona

Country	City
Spain	Barcelona

Address: Calle Bolivia 68-70, 08018, Barcelona

Ogilvy is a pioneer in Pervasive Advertising, Marketing and Corporate Communications.

Related internship programs:
- Artificial Intelligence in Design
- Personal Brand Construction

Computer Science

NeoAttack

Country	City
Spain	Madrid

Address: Calle Santa Engracia 151, Planta 1, 1, Madrid

NeoAttack leads the market in carrying out SEO and advertising strategies.

Related internship programs:
Graphic Design
- Software Development

Computer Science

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

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 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 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 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 student 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. 3.- 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 Web Application and Service Development** contains the most complete and up-to-date program in the professional and academic landscape.

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

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

Title: **Internship Program in Web Application and Service Development**

Duration: **3 weeks**

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

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Awards the following

DIPLOMA
to

Mr./Ms. _____, with identification number _____.
For having successfully passed and accredited the following program

INTERNSHIP PROGRAM
in
Web Application and Service Development

This is a qualification awarded by this University, with a duration of 120 hours, with a start date of dd/mm/yyyy and an end date of dd/mm/yyyy.

TECH is a Private Institution of Higher Education recognized by the Ministry of Public Education as of June 28, 2018.

June 17, 2020

Tere Guevara Navarro
Dean

Unique TECH Code: AFWORD23S   techtitute.com/certificates

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