

---

# **SOFTWARE REQUIREMENTS SPECIFICATION**

for

## **ESPOLTEL HIRING MANAGER**

**Version 1.0**

**Jeremy Rodrigo Poveda Gorotiza  
José David Ramos Rios  
Diego Fernando Flores Rengifo  
Ariana Valentina Palacios Saenz  
Alex Javier Vizuete Pereira**

**Submitted to:** Francisco Ramirez

**January 14, 2025**

# Revision History

Name	Date	Reason for Changes	Version
Team 3	2024-10-30	Initial draft	1.0

# Contents

<b>1</b>	<b>Introduction</b>	<b>8</b>
1.1	Client . . . . .	8
1.2	Purpose . . . . .	8
1.3	Glossary . . . . .	8
1.4	References . . . . .	9
<b>2</b>	<b>Project Scope</b>	<b>10</b>
2.1	Scope . . . . .	10
2.2	General Objective . . . . .	10
2.3	Specific Objective . . . . .	10
<b>3</b>	<b>Overall Description</b>	<b>12</b>
3.1	Product Perspective . . . . .	12
3.2	Product Functions . . . . .	12
3.2.1	Web Component Overview . . . . .	12
3.2.2	Mobile Application Features . . . . .	13
<b>4</b>	<b>Modules</b>	<b>14</b>
4.1	Module Featuring: Web application . . . . .	14
4.2	Modules Breakdown . . . . .	15
4.3	Module Featuring: Mobile application . . . . .	16
4.4	Modules Breakdown . . . . .	17
<b>5</b>	<b>User stories (Functional requirements)</b>	<b>19</b>
5.1	Web application . . . . .	19
5.1.1	Must . . . . .	19
5.1.2	Should . . . . .	21
5.1.3	Could . . . . .	27
5.1.4	Won't . . . . .	29
5.2	Mobile application . . . . .	31
5.2.1	Must . . . . .	31
5.2.2	Should . . . . .	31
5.2.3	Could . . . . .	34
5.2.4	Won't . . . . .	36
<b>6</b>	<b>Non functional Requirements</b>	<b>37</b>
6.1	Web application . . . . .	37
6.2	Mobile application . . . . .	38
<b>7</b>	<b>Individual Contributions</b>	<b>39</b>
<b>8</b>	<b>Appendix</b>	<b>40</b>
8.1	Appendix A: Github Repository . . . . .	40
8.2	Appendix B: Commitment Agreement . . . . .	40
8.3	Appendix C: Evidence of requirements gathering . . . . .	41
8.4	Appendix D: Web Application Prototype Screenshots . . . . .	42

8.5 Appendix E: Mobile Application Prototype Screenshots . . . . . 71

# List of Figures

4.1	Model Featuring Web application . . . . .	15
4.2	Model Featuring Web application . . . . .	17
8.1	Commitment agreement signed by the client . . . . .	41
8.2	View of role type selection in ESPOLTEL for authentication . . . . .	42
8.3	View of the administrator role selection . . . . .	43
8.4	System login view . . . . .	43
8.5	System registration view, step one: basic information . . . . .	44
8.6	System registration view, step two: entering email address . . . . .	44
8.7	System registration view, step three: email confirmation . . . . .	45
8.8	View of all projects of a director . . . . .	45
8.9	View of the creation of a project by a director . . . . .	46
8.10	View of the selection of a project's estimated timeline . . . . .	46
8.11	View of the creation of a project position . . . . .	47
8.12	View of the creation of a project profile . . . . .	47
8.13	Project view with roles and profiles . . . . .	48
8.14	View of detailed project information . . . . .	48
8.15	View of aspirants that have applied for a project . . . . .	49
8.16	View of a project edition . . . . .	49
8.17	View of contracted personnel of a project . . . . .	50
8.18	View of the personnel contract file . . . . .	50
8.19	View of all profiles managed by a director . . . . .	51
8.20	View of a profile with its postulations in detail . . . . .	51
8.21	View of project profiles . . . . .	52
8.22	View of the manager's document signer . . . . .	52
8.23	View of profiles pending review by human talent . . . . .	53
8.24	View a profile revision to edit and accept it . . . . .	53
8.25	View of contract and confidential agreement formats . . . . .	54
8.26	View of the format creation, step one: create form . . . . .	54
8.27	View of the format creation, step two: upload the word file . . . . .	55
8.28	View of incoming postulations . . . . .	55
8.29	View validation of documents to accept a postulation under review . . . . .	56
8.30	View of the result of the validation of the postulation to notify the result . . . . .	56
8.31	View of the interviews . . . . .	57
8.32	View of the results of an interview . . . . .	57
8.33	View of an interview schedule . . . . .	58
8.34	View of the choice of aspirant to interview . . . . .	58
8.35	View of aspirants interviewed . . . . .	59
8.36	View of a postulation for acceptance or rejection . . . . .	59
8.37	View of all profiles in hiring . . . . .	60
8.38	View of the hiring information of a postulation to a profile to save the information . . . . .	60
8.39	View of the hiring form received from the aspirant along with his files for hiring . . . . .	61
8.40	View of the verification of the contract form . . . . .	61
8.41	View of postulations with pending contracts . . . . .	62
8.42	View of the contract generation of an application . . . . .	62

8.43 View of the generated contract to be sent to the aspirant . . . . .	63
8.44 View of the contract signed by the aspirant ready to validate his signature, and send it to the manager . . . . .	63
8.45 View of the contract signed by both parties to save it to the system . . . . .	64
8.46 View of all personnel hired by ESPOLTEL . . . . .	64
8.47 View of the aspirant's home page . . . . .	65
8.48 View of the code entry of a hiring profile . . . . .	65
8.49 Detailed view of the position and profile to apply for the position . . . . .	66
8.50 View to upload files needed for the initial application, resume and ID, part one .	66
8.51 View to upload files needed for the initial application, resume and ID, part two .	67
8.52 View of postulation confirmation . . . . .	67
8.53 View of user information . . . . .	68
8.54 View of email and credentials edition . . . . .	68
8.55 View of all postulations of an aspirant . . . . .	69
8.56 View of aspirant notifications . . . . .	69
8.57 View of submitted contract forms . . . . .	70
8.58 View of aspirant's contracts . . . . .	70
8.59 View of the aspirant's signatory . . . . .	71
8.60 View mobile application login page . . . . .	71
8.61 View of the registration inside the mobile application . . . . .	72
8.62 View of the dashboard of the mobile application . . . . .	72
8.63 View of the mobile application sidebar . . . . .	73
8.64 Status view of an postulation . . . . .	73

# List of Tables

5.1	User Story: Simple Signer (Web application) . . . . .	19
5.2	User Story: Aspirant application (Web application) . . . . .	19
5.3	User Story: Sign validation (Web application) . . . . .	20
5.4	User Story: Simultaneous Signer (Web application) . . . . .	20
5.5	User Story: Digital Certificate Upload for Aspirants (Web application) . . . . .	20
5.6	User Story: Digital Certificate Upload for Managers (Web application) . . . . .	21
5.7	User Story: Aspirant information for application (Web application) . . . . .	21
5.8	User Story: Account Creation for ESPOLTEL Hiring Manager (Web application)	22
5.9	User Story: Project Creation with Details (Web application) . . . . .	22
5.10	User Story: Role and Profile Definition for Project (Web application) . . . . .	22
5.11	User Story: Project Monitoring for Managers (Web application) . . . . .	23
5.12	User Story: Project Monitoring for Aspirants (Web application) . . . . .	23
5.13	User Story: Automatic Document Generation (Web application) . . . . .	23
5.14	User Story: Verifying Applicant Requirements (Web application) . . . . .	24
5.15	User Story: Secure Login (Web application) . . . . .	24
5.16	User Story: Role Selection Before Login (Web application) . . . . .	24
5.17	User Story: Upload Templates by Role and Hiring Profile (Web application) . . . . .	25
5.18	User Story: Applicant Cancels Application for Role or Profile (Web application)	25
5.19	User Story: Schedule Interviews (Web application) . . . . .	26
5.20	User Story: Record Interview Results . . . . .	26
5.21	User Story: Viewing Signed Contracts (Web application) . . . . .	27
5.22	User Story: Recommending an Aspirant for a Project Role (Web application) . . . . .	27
5.23	User Story: Password Recovery (Web application) . . . . .	27
5.24	User Story: Email Verification (Web application) . . . . .	28
5.25	User Story: Downloading Signed Contracts (Web application) . . . . .	28
5.26	User Story: Add Private Comments on Applicant Profiles (Web application) . . . . .	28
5.27	User Story: Restricting Access to Unapplied Projects (Web application) . . . . .	29
5.28	User Story: Prevent Editing of Submitted Application (Web application) . . . . .	29
5.29	User Story: Restrict Viewing of Draft or Unapproved Projects (Web application)	30
5.30	User Story: Restrict Additional Document Uploads Post-Approval (Web application) . . . . .	30
5.31	User Story: Mobile Notifications (Mobile application) . . . . .	31
5.32	User Story: Project Monitoring for Aspirants (Mobile application) . . . . .	31
5.33	User Story: Project Monitoring for Managers (Mobile application) . . . . .	32
5.34	User Story: Accessing Pending Documents (Mobile application) . . . . .	32
5.35	User Story: Account Creation for ESPOLTEL Hiring Manager (Mobile Application)	32
5.36	User Story: Secure Login (Mobile Application) . . . . .	33
5.37	User Story: Role Selection Before Login (Mobile Application) . . . . .	33
5.38	User Story: Filter Applicants by Skills and Experience (Web application) . . . . .	34
5.39	User Story: Viewing Signed Contracts (Mobile application) . . . . .	34
5.40	User Story: Password Recovery (Mobile application) . . . . .	35
5.41	User Story: Email Verification (Mobile application) . . . . .	35
5.42	User Story: Downloading Signed Contracts (Mobile application) . . . . .	35
5.43	User Story: Limiting Advanced Features in Mobile App (Mobile application) . . . . .	36

7.1 Responsibilities of each member of team 3 . . . . .	39
---	----

# 1 Introduction

Throughout this document, we will detail the product designed to meet ESPOLTEL's needs. ESPOLTEL is a company dedicated to innovative project management, focused on the advancement of technological development in Ecuador. In order to improve efficiency in the creation and initial management flows of projects, Espotel Hiring Manager aims to meet all the requirements that current tools may not fully comply with.

During this process, the [MoSCoW](#) methodology was applied to manage the development iteratively, with functional requirements structured as user stories. Functional requirements were prioritized using the [SCRUM](#) method to clearly define their importance, and non-functional requirements were organized by the [Sommerville](#) classification.

## 1.1 Client

Francisco Ramirez is one of the lead systems analyst on ESPOLTEL, he is the main client in responsible for the project's completion. ESPOLTEL S.A. is a company dedicated to innovation in [IT](#) project management and consulting, which is why we handle multiple clients from different disciplines that are looking for technological solutions in Ecuador.

## 1.2 Purpose

The system aims to optimize and automate ESPOLTEL's recruitment and project management processes, serving both internal stakeholders, such as project managers, managers, human talent, human resources staff and aspirants. Project managers have to send recruitment requests, specifying aspirant profiles and job requirements, while the human talent department can oversee document requests to aspirants, human resources has to manage the creation of contracts and verify electronic signatures. In addition, aspirants need to track the progress of their application, while managers need to simultaneously review and securely sign multiple documents electronically. For improve interaction efficiency, reduce processing times, and support secure document handling throughout ESPOLTEL. This system is necessary because the software tools they currently use are too basic and their signer only allows them to sign one document at a time, making it ineffective.

## 1.3 Glossary

**SCRUM:** Scrum is a way for teams to complete work in small, manageable pieces, incorporating continuous experimentation and feedback loops to learn and improve along the way. Scrum helps people and teams deliver value incrementally in a collaborative manner. It is an agile framework for software engineering [1].

**MoSCoW:** Represents four categories of initiatives: must-have, should-have, could-have, and won't-have, or will not have right now, is a popular prioritization technique for managing requirements [2].

**Sommerville:** Ian Sommerville's classification for non-functional requirements [3].

**IT:** The science and activity of using computers and other electronic equipment to store and send information. IT is the abbreviation for information technology [4].

## 1.4 References

- [1] Scrum.org. (2024) What is scrum? <https://www.scrum.org/resources/what-scrum-module>. Accessed: 2024-11-04. [Online]. Available: <https://www.scrum.org/resources/what-scrum-module>
- [2] ProductPlan. (2023) Moscow prioritization. Accessed: 2024-11-04. [Online]. Available: <https://www.productplan.com/glossary/moscow-prioritization/>
- [3] Ian Sommerville, *Software Engineering*, 2023, accessed: 2024-11-04. [Online]. Available: [https://gc.scalahed.com/recursos/files/r161r/w25469w/ingdelsoftwarelibro9\\_compressed.pdf](https://gc.scalahed.com/recursos/files/r161r/w25469w/ingdelsoftwarelibro9_compressed.pdf)
- [4] Cambridge Dictionary. (2024) It. Accessed: 2024-11-04. [Online]. Available: <https://dictionary.cambridge.org/dictionary/english/it>

# 2 Project Scope

## 2.1 Scope

The software system will be implemented on two platforms; mobile and web application. In terms of functionalities, the system will provide a series of specific features for each type of user on the **web platform**. The main functionalities for each are detailed below: **Project creation** The system will allow managers to create projects, defining both the required profile of workers and the number of workers needed. In addition, the manager will be able to recommend workers for a position that previously worked in ESPOLTEL.

**Project applications** The system will allow aspirants to send the information required for contracting according to the profile to which they apply. In addition, they will be able to sign contracts and/or confidential agreements digitally to formalize their participation in the projects. The system will keep track of aspirants throughout the process.

**Verification of aspirant requirements** The system will allow the human talent department to verify if the job profile is met by the aspirants with a check-list.

**Generator of confidential contracts and agreements** The product will allow the elaboration of automatic contracts depending on the profile, and tracking of electronic signatures for both aspirants and the manager.

**Aspirant signature verification** The applications signed by the aspirants must be validated by the human resources director or assistant to be sent to management.

**Electronic signatory** The system will allow project managers to accept project candidates simultaneously through an electronic signature, enabling them to sign multiple documents at once in a single view after entering their credentials. Aspirants can also electronically sign these documents to confirm their participation. The system must identify the specific location for the signature on each type of document.

On the other hand, the functionalities of the **mobile** application will be the following: **Tracking panel** The system will allow managers, human resources and directors to see the current status of their contracts pending signature, and the status of each aspirant in their hiring of the projects they are in charge of. **Application and contract signature notifications** Aspirant and managers will be notified of the process of their application and to sign their contracts and/or confidential treaties.

## 2.2 General Objective

Automate and optimize the personnel hiring process, which is part of human talent management, through the development of a system and its integration with a platform with electronic signature, facilitating interaction for both aspirants and the manager, achieving a more agile and secure process.

## 2.3 Specific Objective

- Reduce the response time in the personnel selection process through the digitalization of workflows.

- Provide project directors and managers with an agile tool for consulting and signing documents anytime, anywhere.
- Improve the experience of aspirants and recurring collaborators with an intuitive system that allows them to streamline their hiring process.

# 3 Overall Description

## 3.1 Product Perspective

ESPOLTEL manages the talent management process, handling multiple projects simultaneously and collaborating with various stakeholders. Currently, it relies on technologies that assist in this mission; however, these tools fail to meet all its requirements. Thus, the objective of this product is to implement the signing of multiple contracts digitally for project managers, achieving an automated talent management process through a centralized web platform that incorporates the process flow for various stakeholders:

- **Project Managers:** Responsible for creating hiring needs and seeking to hire a group of people that meet a specified role and profiles to fulfill those needs.
- **Project Aspirants:** Individuals interested in applying for vacancies at ESPOLTEL projects.
- **Human Resources Department:** Responsible for requesting documents and information from aspirants according to the required profile, create documents such as contracts and confidentiality agreements, validating profile qualifications, and verifying electronic signatures. This role ensures that the paperwork in the hiring process will complete with success in each stage.
- **Managers:** Responsible for making final hiring decisions regarding aspirants.

In addition, a mobile application will be included with a contract tracking panel, allowing directors and managers to view the current status of pending contracts requiring signatures. Another functionality available to aspirants is the notification of acceptance into the application process, followed by the respective signing of contracts and/or confidentiality agreements.

## 3.2 Product Functions

### 3.2.1 Web Component Overview

The ESPOLTEL web component is designed to optimize and automate contract management and project oversight across various user roles. This component centralizes key processes for managers, directors, human resources, and aspirants to facilitate efficient project execution.

The main functionality required by ESPOLTEL in the web component is an API that allows for the simultaneous signing of multiple contracts. This feature is specifically designed for managers, enabling them to view all pre-validated contracts by the Human Resources department and select the contracts they wish to sign collectively.

Additionally, the ESPOLTEL web platform will include an authentication module that allows users to register with a username, password, and email address. This registration process will apply to user profiles such as Directors, Human Resources, Aspirants, and Managers.

Once authenticated, each profile will have tailored access and functionalities:

- **Director Profile:** Directors will have access to a project creation section, where they can define new projects and assign roles and requirements for each position. Directors can also recommend aspirants for a project through a dedicated interface.

- **Human Resources Profile:** Human Resources personnel will have access to views specifically designed for verifying requirements, monitoring contract signatures, and an automated contract generation module. These tools will streamline the validation and documentation process for incoming aspirants.
- **Aspirant Profile:** Aspirants will have a simplified view, limited to project applications and the option to electronically sign their contract if accepted into a project.

### **3.2.2 Mobile Application Features**

The ESPOLTEL mobile component is designed to provide on-the-go access to key functionalities for managers, directors, human resources, and aspirants.

The mobile component focuses on core capabilities such as authentication, contract tracking, and notifications, catering to each user role:

#### **Authentication**

The system allows authentication for Director, Manager, Human Resources, and Aspirant profiles.

#### **Contract Tracking Panel**

The Director, Manager, and Human Resources profiles will have access to information on the status of contracts, as well as the progress within the hiring workflow for each aspirant. This feature will enable these profiles to monitor progress and make informed decisions that contribute to the project's success.

#### **Notifications**

- **For Directors and Managers:** Notifications on each completed stage in the hiring workflow, the status of aspirants, and any pending next steps.
- **For Human Resources:** Notifications on assigned tasks within the hiring workflow, such as document validation and contract signing.
- **For aspirants:** Notifications informing them about the status of their application, any required contract signatures, or if they have been rejected.

## **4 Modules**

### **4.1 Module Featuring: Web application**

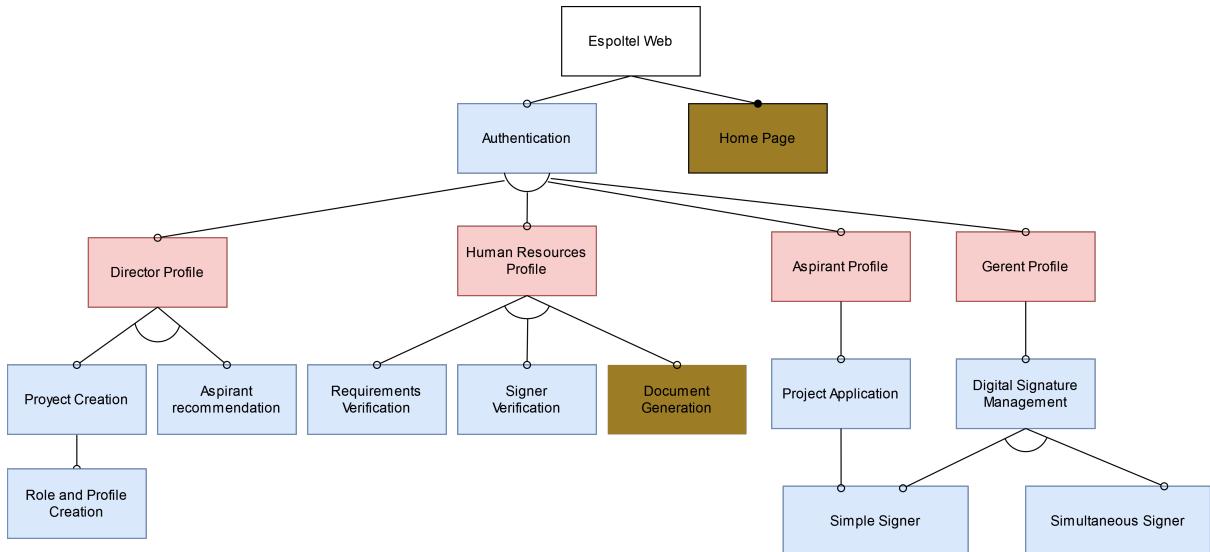


Figure 4.1: Model Featuring Web application

## 4.2 Modules Breakdown

### 4.2.1 Home Page Module

The Home Page module is a component primarily for the users to login in their accounts. It also provides a section to sign up to the system in case of a new user. It's the main entrance to the system.

### 4.2.2 Authentication Module

This module is crucial, as it represents the first layer of system security. Its main function is to verify the authenticity of the user trying to access the system with certain credentials. This module also offers ways to recover a password or a user account through email verifications, in case the user has forgotten any of his credentials. Another important aspect of this module is that it is in charge of identifying which type of user is trying to access the system (directors, managers, aspirants, etc.), authorizing them and redirecting them to the appropriate components.

### 4.2.3 Project Creation Module

The project creation module is a component that belongs to the manager's platform. It allows the manager to create a new project and specify important project data, as well as human talent requirements, explicitly showing the specific profiles and roles to be fulfilled by future aspirants. This project can then be sent to the Human Resources department to be processed and executed by their team.

### 4.2.4 Role and Profile Creation Module

This sub-module of the project creation module allows the project director to quickly and easily define the human talent requirements of the profiles for each role in a given project. These requirements can specify the responsibilities, skills, work experiences of a particular profile for the aspirants. Once defined, the roles and profiles are ready to be sent to human resources for action.

#### **4.2.5 Aspirant recommendation Module**

This module allows project managers to recommend for a role an aspirant who has previously worked with ESPOLTEL. This recommended aspirant has priority in the hiring process.

#### **4.2.6 Requirements Verification Module**

This is an important component for the human resources team. It is necessary for verifying the integrity and requirements of a project defined by a director. Human resources is in charge of the whole project structure review and the profiles requested by the director. This department should also manage the incoming aspirants and verify the forms and the requested information about them.

#### **4.2.7 Signer Verification Module**

Module that goes hand in hand with the digital signature management module, allows the human resources role to verify that the aspirant's signature is valid on documents such as contracts or confidential agreements.

#### **4.2.8 Document Generation Module**

The generation of documents is a module used by Human Resources that generates formatted documents from determinate templates for all of the processes involved in an application. Basically, after the documents and information verification are completed, it is necessary to create documents such as contracts or approvals that need to be signed by the manager and aspirants. This module is in charge of generating these documents in their correct format and then sending them to the roles involved (managers and aspirants).

#### **4.2.9 Project Application Module**

This module is essentially made for the aspirants to fill out the forms and data required for submitting their application. The aspirant will be able to visualize all the projects available posted by directors with the corresponding profiles and roles needed. Then the aspirant can start an application for any project by providing corresponding information, such as a resume and identity forms. After the application is completed, it is going to be sent to Human Resources so they to verifythe information and start the process of profile of the roles selection.

#### **4.2.10 Digital Signature Management Module**

The Digital Signature Management Module allows the manager to select in which way they want to sign documents (one by one or multiple signing).

#### **4.2.11 Simple Signer Module**

Allows the manager and aspirants to electronically sign a single document. It's necessary to input the credentials before sign a document.

#### **4.2.12 Simultaneous Signer Module**

Allows only the manager to sign multiple documents for once. It's necessary to input the credentials one single time for signing all of the documents.

### **4.3 Module Featuring: Mobile application**

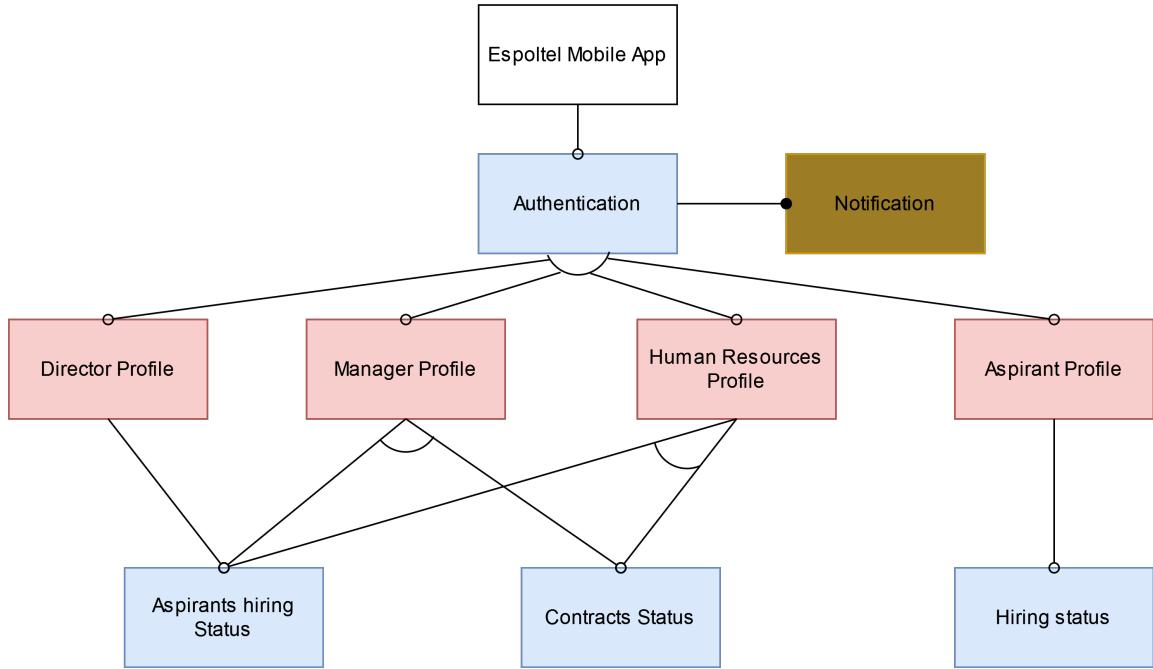


Figure 4.2: Model Featuring Web application

## 4.4 Modules Breakdown

### 4.4.1 Home Page Module

The Home Page module let the users to input their credentials for getting into the system. For the mobile application is mandatory to already have an account created since there's no option for signing up.

### 4.4.2 Authentication Module

This module is crucial as it represents the first layer of security of the system. It's main duty is to verify the authenticity of the user trying to log in to the system with some particular credentials. This module also offers ways of recovering a password or a user account through email verifications, in case the user has forgotten any of their credentials. Another important aspect about this module, is that is the one in charge of identifying what type of user is trying to enter to the system (directors, managers, aspirants, etc.) and redirect them to the correct controls.

### 4.4.3 Notification Module

This module is crucial for the mobile app, as it's the main reason for developing the app. This component has to notify the manager if they have any pending signing of documents and show how many. Also, this module tracks the evolution of a project and notifies the manager if any process is incomplete and it's approaching the deadline. At the same time, the notification module serves the aspirants and directors as a notifier on any updates towards the aspirants and selection process.

#### **4.4.4 Contract Status Module**

This component tracks the status of the contracts generated by human resources for the aspirants. If any change is detected, it notifies the director, aspirant, and manager about what was updated.

#### **4.4.5 Hiring Status Module**

This component tracks the status of one aspirant, whether aspirant has followed the hiring flow, and the current status is in. It would also tell the applicant what he/she has to do to go to the next phase.

#### **4.4.6 Aspirants Hiring Status Module**

This component tracks the status of all applicants, their status in the hiring flow and their current status. It also indicates in which project they are applying for the projects that the directors or managers are in charge of.

# 5 User stories (Functional requirements)

## 5.1 Web application

### 5.1.1 Must

<b>Identifier</b>	WM1
<b>Priority</b>	1
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I must be able to digitally sign my contract and confidentiality agreement so that I can complete the paperwork required for my hiring.
<b>Reverse Card</b>	<ul style="list-style-type: none"><li>The product needs to use FirmaEC's external module to ensure security in digital signatures.</li><li>The aspirant must have a token loaded in the product.</li><li>Signers must enter their credentials associated with their token before they can sign.</li></ul>

Table 5.1: User Story: Simple Signer (Web application)

<b>Identifier</b>	WM2
<b>Priority</b>	1
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I must be able to apply for a role in a project of interest in which I qualify for the requested profile. In order to be able to get my role of interest.
<b>Reverse Card</b>	<ul style="list-style-type: none"><li>Most projects are not public, so only authorized personnel can see them.</li><li>The aspirant must be notified if his or her application has been accepted.</li><li>The product must support concurrency of multiple aspirants and synchronize them in the order of events.</li></ul>

Table 5.2: User Story: Aspirant application (Web application)

<b>Identifier</b>	WM3
<b>Priority</b>	1
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a member of Human Resources, I must have to validate the electronic signatures of applicants, to ensure that contracts and agreements are formalized.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• The product needs to use FirmaEC's external module to ensure security in digital signs.</li> <li>• Document signature verification should not take more than one minute.</li> </ul>

Table 5.3: User Story: Sign validation (Web application)

<b>Identifier</b>	WM4
<b>Priority</b>	1
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a manager, I must have to be able to digitally sign multiple documents, such as contracts or confidentiality agreements, simultaneously, so that I can save time and work more efficiently.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• The product needs to use FirmaEC's external module to ensure security in digital signs.</li> <li>• The manager must have a token loaded in the product.</li> <li>• Signers must put their credentials associated with their token before they can sign.</li> </ul>

Table 5.4: User Story: Simultaneous Signer (Web application)

<b>Identifier</b>	WM5
<b>Priority</b>	1
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I must be able to upload my digital certificate to the platform so that I can sign multiple documents such as contracts or confidentiality agreements for the projects I have applied for.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• The product needs to ensure that the digital certificate is uploaded securely and can be validated during the signing process.</li> <li>• The aspirant must be able to use their digital certificate to sign documents without additional manual input.</li> <li>• The product could store in a very secure database this file for future signatures.</li> <li>• It must be validated that it is a correct certificate.</li> </ul>

Table 5.5: User Story: Digital Certificate Upload for Aspirants (Web application)

<b>Identifier</b>	WM6
<b>Priority</b>	1
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a manager, I must be able to upload my digital certificate to the platform so that I can sign multiple documents such as contracts or confidentiality agreements for the projects I am managing.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The product needs to ensure that the digital certificate is uploaded securely and can be validated during the signing process.</li> <li>The manager must be able to use their digital certificate to sign documents without additional manual input.</li> <li>The platform must verify the authenticity of the certificate before allowing document signing</li> <li>The product could store in a very secure database this file for future signatures.</li> </ul>

Table 5.6: User Story: Digital Certificate Upload for Managers (Web application)

### 5.1.2 Should

<b>Identifier</b>	WS1
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I should be able to upload my personal documents (such as CV, document ID, certificates, etc.) and pertinent information to complete the application requirements.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The files and information must have a database so that the aspirant can update them if required for future project's.</li> <li>To receive the information in plain text, applicants will have to fill out a form made by Human Resources.</li> </ul>

Table 5.7: User Story: Aspirant information for application (Web application)

<b>Identifier</b>	WS2
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an ESPOLTEL Hiring Manager user, I should be able to create my own account to have access to all controls corresponding to my role, so that my information and permissions are separate from those of other users.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The product must verify the e-mail address in the registration process.</li> <li>Admin roles account creation process should include role-specific permissions to ensure secure and appropriate access levels.</li> <li>User data and permissions must be stored in a secure database, with separation of permissions to ensure controls are distinct from other user roles.</li> </ul>

Table 5.8: User Story: Account Creation for ESPOLTEL Hiring Manager (Web application)

<b>Identifier</b>	WS3
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a project manager, I want to be able to create a project by defining its name, description, start date, end date, and project type, so that the project's objectives and timeline are clearly established.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must allow the project manager to input detailed information such as the project's name, description, start date, end date, and type.</li> <li>The product should validate the input dates to ensure the end date is after the start date.</li> <li>The project manager should be able to edit or delete a project if needed.</li> </ul>

Table 5.9: User Story: Project Creation with Details (Web application)

<b>Identifier</b>	WS4
<b>Priority</b>	2
<b>Dependencies</b>	WS3
<b>Version</b>	V1.0
<b>Description</b>	As a project manager, I want to be able to define roles and necessary profiles for the project, including the required skills and experience for each role, so that applicants can understand the requirements and apply for suitable positions.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must allow the project manager to specify detailed requirements for each role, such as required skills and experience.</li> <li>The requirements for each role should be listed in a checklist style for clarity.</li> <li>The project manager should be able to edit or delete roles and requirements as needed.</li> </ul>

Table 5.10: User Story: Role and Profile Definition for Project (Web application)

<b>Identifier</b>	WS5
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a manager or project director of ESPOLTEL, I should be able to monitor the projects under my supervision to maintain better control and make informed decisions.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must provide a project overview dashboard for managers, for assigned team members and their hiring progress.</li> <li>Managers should have access to real-time updates of the hiring process of their team members on their projects.</li> <li>The product must allow managers to filter and search their projects.</li> </ul>

Table 5.11: User Story: Project Monitoring for Managers (Web application)

<b>Identifier</b>	WS6
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I should be able to monitor the projects I have applied for, to stay updated on their progress and better manage my participation.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must provide a project overview dashboard for aspirants, displaying the projects they have applied for.</li> <li>Aspirants should have access to real-time updates on the status of the projects they have applied for.</li> <li>The product must allow applicants to filter and search the projects they have applied for.</li> </ul>

Table 5.12: User Story: Project Monitoring for Aspirants (Web application)

<b>Identifier</b>	WS7
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a member of Human Resources, I should be able to generate contracts and agreements from templates, to save time in creating customized documents.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must provide the ability to generate contracts and agreements based on pre-defined templates.</li> <li>The information on these documents was obtained from the forms sent to the applicant.</li> <li>Other important information in these documents, such as the start and end of the contract, must be configurable.</li> <li>The document generation should not take more than 5 minutes.</li> </ul>

Table 5.13: User Story: Automatic Document Generation (Web application)

<b>Identifier</b>	WS8
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a Human Resources member, I should be able to verify the requirements based on an applicant's information, to ensure that they meet the necessary qualifications for a project.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>Human resources members should be able to access a checklist or list of requirements that can be cross-referenced with the applicant's provided details.</li> </ul>

Table 5.14: User Story: Verifying Applicant Requirements (Web application)

<b>Identifier</b>	WS9
<b>Priority</b>	1
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a Espotel Hiring Manager user, I should be able to log into the system securely using my credentials, so that I can access project management features and functionalities.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must provide a secure login interface with fields for username and password.</li> <li>Users should receive error messages for incorrect login attempts.</li> <li>The login process should be secured using encryption.</li> </ul>

Table 5.15: User Story: Secure Login (Web application)

<b>Identifier</b>	WS10
<b>Priority</b>	2
<b>Dependencies</b>	WS9
<b>Version</b>	V1.0
<b>Description</b>	As a ESPOLTEL Hiring Manager user, I should be able to select my role (Aspirant, Project Manager, Project Director, or HR Member) before logging in, so that I can be directed to the appropriate login process and access the specific functionalities related to my role.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must provide a role selection interface before the login screen.</li> <li>Based on the selected role, the system should display their views.</li> <li>The system should restrict access based on the selected role, only allowing access to functionalities permitted for each role.</li> </ul>

Table 5.16: User Story: Role Selection Before Login (Web application)

<b>Identifier</b>	WS11
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a member of Human Resources, I should be able to upload contract and agreement templates for specific roles and hiring profiles, so that the appropriate templates are available for generating customized documents for applicants.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must allow the upload of templates categorized by role and hiring profile.</li> <li>Templates must be stored securely, with role-specific access control.</li> <li>HR staff should be able to select the appropriate template based on the applicant's role and profile.</li> <li>The upload process should validate that the template format is correct and functional, probably in docx format.</li> </ul>

Table 5.17: User Story: Upload Templates by Role and Hiring Profile (Web application)

<b>Identifier</b>	WS12
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I should be able to cancel my application for a specific role or hiring profile, so that I can withdraw from a recruitment process if my circumstances change.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must provide an option for applicants to cancel their application from the user dashboard.</li> <li>The cancellation process should require the applicant to provide a reason for withdrawal, selected from predefined options (e.g., accepted another offer, change in personal circumstances) or as a custom entry.</li> <li>Upon cancellation, Human resources and project managers should receive a notification indicating that the applicant has withdrawn from the process.</li> <li>Once canceled, the product should be flagged as "Withdrawn" and removed from further consideration for that specific role or profile.</li> <li>Aspirants should not be able to reapply for the same role or profile within a set period (e.g., 30 days) after cancellation.</li> </ul>

Table 5.18: User Story: Applicant Cancels Application for Role or Profile (Web application)

<b>Identifier</b>	WS13
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a member of Human Resources, I should be able to schedule interviews with applicants, specifying the date, time, and interviewer, so that the selection process can be carried out efficiently.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• The system must allow the selection of applicants, available dates, times, and interviewers for scheduling.</li> <li>• The interviewers should receive a notification with the details of the scheduled interview, including a link or information to access the virtual meeting room if applicable.</li> <li>• The system should allow rescheduling or canceling interviews, with automatic notifications to the involved parties.</li> <li>• Applicants must be notified of their interview schedule via email, including the date, time, interviewer, and instructions for the interview.</li> <li>• The system should prevent scheduling conflicts, such as double-booking an interviewer or applicant at the same time.</li> </ul>

Table 5.19: User Story: Schedule Interviews (Web application)

<b>Identifier</b>	WS14
<b>Priority</b>	2
<b>Dependencies</b>	WS13
<b>Version</b>	V1.0
<b>Description</b>	As an interviewer, I should be able to record the results and observations of the interviews conducted, including scores and comments, so that there is a formal record of the evaluation of each applicant.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• The system must provide a form for each interview, allowing scores to be entered based on predefined criteria.</li> <li>• Interviewers should be able to add specific comments about the applicant's performance during the interview.</li> <li>• The results and comments must be stored securely and associated with the applicant's profile.</li> <li>• The system should allow authorized users (e.g., HR members, project managers) to access and review the interview results.</li> </ul>

Table 5.20: User Story: Record Interview Results

### 5.1.3 Could

<b>Identifier</b>	WC1
<b>Priority</b>	3
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I should be able to view the contracts for the projects I have applied for and are currently active, so that I can have a clear view of the agreements I have signed.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• Applicants should be able to filter and search for specific contracts based on the project or date.</li> <li>• Contracts should be displayed in a readable format on the web application.</li> </ul>

Table 5.21: User Story: Viewing Signed Contracts (Web application)

<b>Identifier</b>	WC2
<b>Priority</b>	3
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a Project manager, I could be able to recommend an aspirant who has previously worked for ESPOLTEL for a role in a project, based on their past performance and experience, to have a worker in whom I have confidence in my project.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• Recommended aspirants will be given priority in the hiring process.</li> <li>• The product must provide an easy way for Project Managers to send recommendations directly from the system.</li> </ul>

Table 5.22: User Story: Recommending an Aspirant for a Project Role (Web application)

<b>Identifier</b>	WC3
<b>Priority</b>	3
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an ESPOLTEL hiring manager user, I could be able to recover my password through a secure and efficient process if I forget it, so that I can regain access to the system and continue with my responsibilities without delay.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• The password recovery process should be secure, utilizing verification methods (e.g., email or phone number confirmation).</li> <li>• The product must provide an easy-to-use recovery interface accessible from the login page.</li> <li>• If I do not have access to any of the recovery methods I will be notified that I cannot recover my password.</li> </ul>

Table 5.23: User Story: Password Recovery (Web application)

<b>Identifier</b>	WC4
<b>Priority</b>	1
<b>Dependencies</b>	WS2
<b>Version</b>	V1.0
<b>Description</b>	As an ESPOLTEL Hiring Manager user, I could be able to verify my email address upon registration, so that I ensure secure access to the system and confirm my identity.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system should send a verification link or code to the user's email address upon registration.</li> <li>Users must complete the email verification process before accessing sensitive features.</li> <li>If the verification code is incorrect the product must inform them.</li> </ul>

Table 5.24: User Story: Email Verification (Web application)

<b>Identifier</b>	WC5
<b>Priority</b>	3
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I should be able to download the contracts for the projects I have applied for and are currently active, so that I can have a record of the agreements I have signed.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>Applicants should be able to download contracts to their devices in a suitable format (e.g., PDF).</li> </ul>

Table 5.25: User Story: Downloading Signed Contracts (Web application)

<b>Identifier</b>	WC6
<b>Priority</b>	3
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a Human Resources member, I could be able to add private comments on applicant profiles to keep a record of observations and notes during the selection process.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system should provide a comment section within each applicant's profile accessible only to authorized Human Resources members.</li> <li>Comments must be saved securely and associated with specific applicants for future reference.</li> <li>Human Resources should have the ability to edit or delete their own comments as needed.</li> </ul>

Table 5.26: User Story: Add Private Comments on Applicant Profiles (Web application)

### 5.1.4 Won't

<b>Identifier</b>	WW1
<b>Priority</b>	4
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an ESPOLTEL Hiring Manager administrator, I won't be allowed to aspirants view projects they have not applied for, in order to protect the company's private information.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• The system must restrict aspirants access to only those projects for which they have submitted an application.</li> <li>• The product should notify applicants when attempting to access restricted projects, maintaining confidentiality of project information.</li> <li>• Nor would it be possible to see projects that have already passed the contracting period.</li> </ul>

Table 5.27: User Story: Restricting Access to Unapplied Projects (Web application)

<b>Identifier</b>	WW2
<b>Priority</b>	4
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an applicant, I won't be able to edit my application once it has been submitted, to ensure the integrity of the information provided to managers and human resources.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• The system must block the editing of applications once they have been submitted.</li> <li>• Applicants should receive a notification indicating that no changes can be made after submission.</li> <li>• Human Resources should be able to view the original version of the application without any subsequent modifications.</li> </ul>

Table 5.28: User Story: Prevent Editing of Submitted Application (Web application)

<b>Identifier</b>	WW3
<b>Priority</b>	4
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an applicant, I won't be able to view projects that are in draft status or have not been officially approved by management, to protect the confidentiality of projects that are not yet available to the public.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must restrict the visibility of projects in draft or unapproved status to only authorized internal users.</li> <li>Applicants attempting to access restricted projects should see a notification indicating that the project is not available for viewing.</li> <li>The product should only display projects with approved and public status to applicants.</li> </ul>

Table 5.29: User Story: Restrict Viewing of Draft or Unapproved Projects (Web application)

<b>Identifier</b>	WW4
<b>Priority</b>	4
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a member of Human Resources, I won't be able to upload additional documents for each applicant once the application has been approved, to ensure that the hiring process follows a controlled flow without post-approval modifications.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must lock document uploads for an applicant once their application status changes to "approved."</li> <li>Human Resources members attempting to upload documents after approval should see a notification explaining that additional uploads are restricted.</li> <li>The product should allow only pre-approved or initial documents to be accessible post-approval for compliance.</li> </ul>

Table 5.30: User Story: Restrict Additional Document Uploads Post-Approval (Web application)

## 5.2 Mobile application

### 5.2.1 Must

<b>Identifier</b>	MM1
<b>Priority</b>	1
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a user of the ESPOLTEL Hiring Manager mobile application, I need to receive notifications for any important events in the hiring process, so that I can stay informed and respond promptly.
<b>Reverse Card</b>	<ul style="list-style-type: none"><li>The system must send real-time notifications for key events in the hiring process, such as new applicant submissions, documents pending signature, etc. Depending on the role</li><li>Users should have the option to customize the types of notifications they receive based on their preferences.</li><li>Notifications can be configured to occur at one time of the day or at various periods of the day</li><li>The product must ensure that notifications are clear, concise, and provide direct links to relevant information within the mobile application.</li></ul>

Table 5.31: User Story: Mobile Notifications (Mobile application)

### 5.2.2 Should

<b>Identifier</b>	MS1
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I should be able to monitor on my smartphone the projects I have applied for, to stay updated on their progress and better manage my participation.
<b>Reverse Card</b>	<ul style="list-style-type: none"><li>The system must provide a project overview dashboard for aspirants, displaying the projects they have applied for.</li><li>Applicants should have access to real-time updates on the status of the projects they have applied for.</li><li>The product must allow applicants to filter and search the projects they have applied for.</li></ul>

Table 5.32: User Story: Project Monitoring for Aspirants (Mobile application)

<b>Identifier</b>	MS2
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a manager or project director of ESPOLTEL, I should be able to monitor on my smartphone the projects under my supervision to maintain better control and make informed decisions.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must provide a project overview dashboard for managers, for assigned team members and their hiring progress.</li> <li>Managers should have access to real-time updates of the hiring process of their team members on their projects.</li> <li>The product must allow managers to filter and search their project.</li> </ul>

Table 5.33: User Story: Project Monitoring for Managers (Mobile application)

<b>Identifier</b>	MS3
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an applicant or manager, I should have access to confidential contracts or agreements that are pending my signature, so that I can review and digitally sign them within the web application.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>Users should be able to review the full content of each contract or agreement before signing.</li> </ul>

Table 5.34: User Story: Accessing Pending Documents (Mobile application)

<b>Identifier</b>	MS4
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an ESPOLTEL Hiring Manager user, I should be able to create my own account using the mobile application, so that I can access all controls corresponding to my role, and ensure that my information and permissions are separated from those of other users.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The mobile application must verify the e-mail address during the registration process.</li> <li>Admin roles account creation process should include role-specific permissions to ensure secure and appropriate access levels.</li> <li>User data and permissions must be stored securely in the database, with separation of permissions to ensure controls are distinct from other user roles.</li> </ul>

Table 5.35: User Story: Account Creation for ESPOLTEL Hiring Manager (Mobile Application)

<b>Identifier</b>	MS5
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an ESPOLTEL user, I should be able to log into the system securely using my credentials on my mobile device, so that I can access the appropriate features and functionalities based on my user role.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The mobile application must provide a secure login interface with fields for username and password.</li> <li>Users should receive error messages for incorrect login attempts.</li> <li>The login process should be secured using encryption to protect user data.</li> </ul>

Table 5.36: User Story: Secure Login (Mobile Application)

<b>Identifier</b>	MS6
<b>Priority</b>	2
<b>Dependencies</b>	MS5
<b>Version</b>	V1.0
<b>Description</b>	As an ESPOLTEL user, I should be able to select my role (Aspirant, Project Manager, Project Director, or HR Member) on my mobile device before logging in, so that I can be directed to the specific features and functionalities relevant to my role.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The mobile application must provide a role selection interface before the login screen.</li> <li>Based on the selected role, the mobile application should display a role-specific view after login.</li> <li>Access to functionalities should be restricted based on the selected role, allowing only those permitted for each role.</li> </ul>

Table 5.37: User Story: Role Selection Before Login (Mobile Application)

<b>Identifier</b>	WS8
<b>Priority</b>	2
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a Human Resources member, I should be able to view applicants by specific skills and experience to facilitate the selection of candidates who meet the project requirements.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system must provide a filtering feature in the applicant list that allows Human Resources to search by skills and experience.</li> <li>Human Resources should be able to apply multiple filters simultaneously to refine the candidate list.</li> <li>The system should display only applicants that match the selected criteria for easy review.</li> </ul>

Table 5.38: User Story: Filter Applicants by Skills and Experience (Web application)

### 5.2.3 Could

<b>Identifier</b>	MC1
<b>Priority</b>	3
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I could be able to view the contracts for the projects I have applied for and are currently active on my smartphone, so that I can have a clear view of the agreements I have signed.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>Applicants should be able to filter and search for specific contracts based on the project or date.</li> <li>Contracts should be displayed in a readable format on the smartphone screen.</li> </ul>

Table 5.39: User Story: Viewing Signed Contracts (Mobile application)

<b>Identifier</b>	MC2
<b>Priority</b>	3
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an ESPOLTEL hiring manager user, I could be able to recover my password through a secure and efficient process via email from my mobile device if I forget it, so that I can regain access to the system and continue with my responsibilities without delay.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The password recovery process should be secure, utilizing email verification methods.</li> <li>The product must provide an easy-to-use recovery interface accessible from the mobile login page.</li> <li>If I do not have access to my email, I will be notified that I cannot recover my password.</li> </ul>

Table 5.40: User Story: Password Recovery (Mobile application)

<b>Identifier</b>	MC3
<b>Priority</b>	1
<b>Dependencies</b>	WS2
<b>Version</b>	V1.0
<b>Description</b>	As an ESPOLTEL Hiring Manager user, I could be able to verify my email address upon registration from my mobile device, so that I ensure secure access to the system and confirm my identity.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>The system should send a verification link or code to the user's email address upon registration.</li> <li>Users must complete the email verification process before accessing sensitive features.</li> <li>If the verification code is incorrect, the product must inform them.</li> </ul>

Table 5.41: User Story: Email Verification (Mobile application)

<b>Identifier</b>	MC4
<b>Priority</b>	3
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As an aspirant, I could be able to download the contracts for the projects I have applied for and are currently active on my smartphone, so that I can have a record of the agreements I have signed.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>Applicants should be able to download contracts to their smartphones in a suitable format (e.g., PDF).</li> <li>The download process should ensure that the contract is available offline once downloaded.</li> </ul>

Table 5.42: User Story: Downloading Signed Contracts (Mobile application)

#### 5.2.4 Won't

<b>Identifier</b>	MW1
<b>Priority</b>	4
<b>Dependencies</b>	None
<b>Version</b>	V1.0
<b>Description</b>	As a user of the ESPOLTEL Hiring Manager mobile application, I won't be able to sign documents or perform advanced operations beyond viewing information and receiving notifications, in order to keep the mobile app lightweight and focused on this specific use case.
<b>Reverse Card</b>	<ul style="list-style-type: none"> <li>• The system must restrict advanced features such as document signing or complex data entry to the desktop or web version of the application.</li> <li>• Mobile users should only have access to viewing project details, applicant statuses, and receiving notifications.</li> <li>• The product must provide clear messaging about feature limitations within the mobile app to set user expectations.</li> </ul>

Table 5.43: User Story: Limiting Advanced Features in Mobile App (Mobile application)

# 6 Non functional Requirements

## 6.1 Web application

### 6.1.1 Product

- **Efficiency/Performance**

The system must be capable of processing and signing multiples contracts simultaneously

#### Validation Criteria

The system will take one minute to sign and process at least ten contracts.

- **Usability**

The system must require forty minutes of training before users can operate it. independently

#### Validation Criteria

During User Acceptance Testing, there will be a training log which will calculate the time taken for users to utilize the main functionalities of the system. The average time taken of every user shouldn't exceed thirty minutes.

Aspirants shouldn't take more twenty minutes to register and find the potential projects to apply for.

The project directors should not take more than thirty minutes to create a project publication specifying the required team composition, developer expertise and experience.

- **Security**

The system services will be available exclusively to registered users

#### Validation Criteria

Through a user authentication test, a user will attempt to access to the system services using both registered and unregistered user accounts. As expected, the system must only allow the user to access the system through the registered account.

### 6.1.2 External

- **Regulatory**

The electronic signature functionality used in the system must comply with the current legal regulations in Ecuador

#### Validation Criteria

The system will utilize FirmaEC services through their API, to ensure that electronic signatures are legally valid and recognized under the Electronic Commerce, Electronic Signatures and Data Messages Law defined in Ecuador.

### **6.1.3 Organizational**

- Environment**

The web application will be compatible with Chrome, Safari, FireFox, Microsoft Edge, and Opera browsers

#### **Validation Criteria**

All services offered by the system must function correctly across all browsers prior mentioned.

## **6.2 Mobile application**

### **6.2.1 Product**

- Efficiency/Performance**

Project directors and Managers must get notified of their pending contracts, while Aspirants of their acceptance in a project.

#### **Validation Criteria**

Notifications should be delivered within 10 seconds.

- Usability**

The system should be easily adaptable by managers in the ESPOLTEL contracting process.

#### **Validation Criteria**

The system must require 10 minutes of training before users can operate it independently

- Security** The system services will be available exclusively to registered users

#### **Validation Criteria**

Through a User Authentication Test, a user will attempt to access to the system services using both registered and unregistered user accounts. As expected, the system must Only allow the user to access the system through the registered account.

### **6.2.2 Organizational**

- Environment**

The application must be supported on both IOS and Android platforms

#### **Validation Criteria**

The application will be available on the Google Play Store and Apple App Store

## 7 Individual Contributions

Student's Names	Contributions
Jeremy Rodrigo Poveda Gorotiza	Project Scope, Introduction, User Stories, Creation of GitHub Repository, prototype: web application for director and managers
Diego Fernando Flores Rengifo	Non functional requirements both Web and Mobile Application, prototype in figma: Authentication module and Applicants Platform
José David Ramos Rios	Product Overview, Product Features, Module Featuring: Mobile App, First Preview of Module Featuring: Web Application, and prototype in figma of Mobile App
Ariana Valentina Palacios Saenz	Revision, User Stories, and prototyping flows and module integration
Alex Javier Vizuete Pereira	Web Application Modules Breakdown, Mobile Application Modules Breakdown, prototype in figma: Applicants Platform, screens, and flow of application process

Table 7.1: Responsibilities of each member of team 3

# **8 Appendix**

## **8.1 Appendix A: Github Repository**

The versioning of the project prototype has been managed using Github. You can find it through the following link ESPOLTEL's versioning project:

[Repository link](#)

## **8.2 Appendix B: Commitment Agreement**

## Acta de compromiso

### Compromiso del Cliente

Por la presente, **Espotel** se compromete a proporcionar el apoyo necesario a los desarrolladores del proyecto durante todo el proceso de desarrollo del software, que incluye la colaboración en la definición de requerimientos, pruebas de funcionalidades y validación final del producto. Este compromiso se mantendrá hasta la conclusión del proyecto, asegurando que los desarrolladores puedan completar su trabajo con la colaboración y retroalimentación adecuada.

La empresa se compromete también a:

- Proveer acceso a la información necesaria para el desarrollo del software.
- Participar en reuniones de revisión y seguimiento del proyecto.
- Facilitar el ambiente de producción para garantizar la calidad del software.

El objetivo de esta colaboración es garantizar que el software desarrollado cumpla con las expectativas y requerimientos definidos por **Espotel** y que los desarrolladores puedan aplicar las mejores prácticas de ingeniería de software en este proyecto.

### Fecha de Revisión:

Responsable del Cliente: **Francisco Ramírez**



Firma del Cliente:

Fecha: 23 de octubre del 2024

Figure 8.1: Commitment agreement signed by the client

## 8.3 Appendix C: Evidence of requirements gathering

Initial interview for requirements gathering with the client

### Template Questions for the Interview

1. Are "Human Talent" and "Human Resources" distinct roles within the company?  
If yes, is the Human Resources area responsible for generating documents such as contracts and confidentiality agreements?

What we understand is as follows:

Human Talent:

- Requests documents and information from applicants.
- Verifies that applicants meet the position requirements.
- Sends the data of candidates who meet the requirements to Human Resources.

Human Resources:

- Generates documents such as contracts and confidentiality agreements.
- Sends the generated contracts or agreements to the applicant.
- Verifies the applicant's signature.
- Sends the documents to managers for their signatures.

2. Must the contracts and confidentiality agreements be signed not only by the managers and applicants but also by the project director?

3. In addition to requesting basic information such as names, surnames, cell phone numbers, etc., should the Human Talent area request specific documents according to the profile, such as copies of the ID, voting card, etc.?
4. Who is responsible for entering the templates of the contracts or confidentiality agreements into the system: Human Talent or Human Resources?
5. Should these templates be created directly within the system? If yes, would the data be in plain text, such as names, surnames, ID numbers, and the positions for electronic signatures (of managers, applicants, and possibly project directors)?
6. Would the stages of the applicant acceptance process be as follows?
  - Application for a profile by submitting information (plain text data and documents). Waiting for a response from Human Talent to verify if the applicant meets the requirements. If the applicant meets the requirements, waiting for the contract and confidentiality agreements to sign, generated by Human Resources.
  - Signing the documents.
  - Waiting for signature validation by Human Resources.
  - Waiting for signatures from managers and directors.
  - Confirmation of participation in the project.

## 8.4 Appendix D: Web Application Prototype Screenshots



Figure 8.2: View of role type selection in ESPOLTEL for authentication

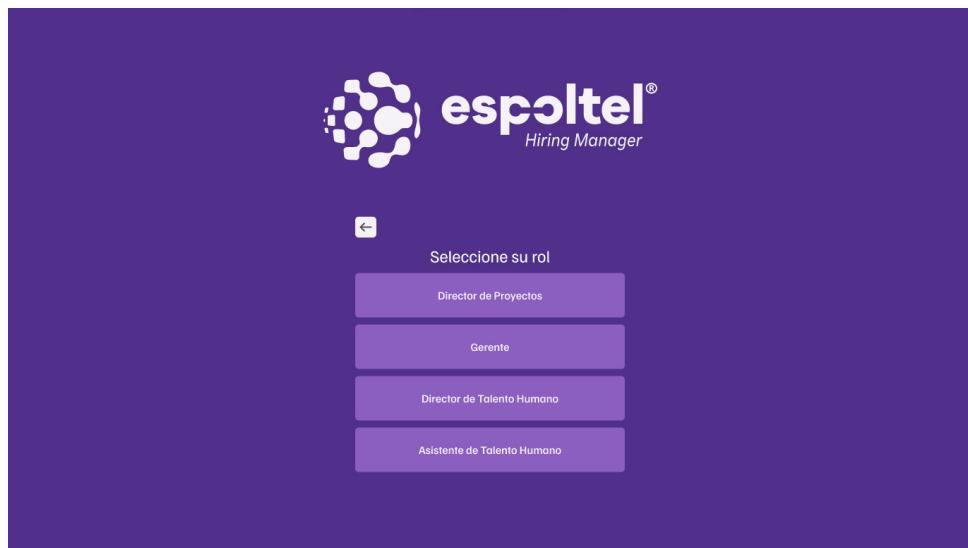


Figure 8.3: View of the administrator role selection

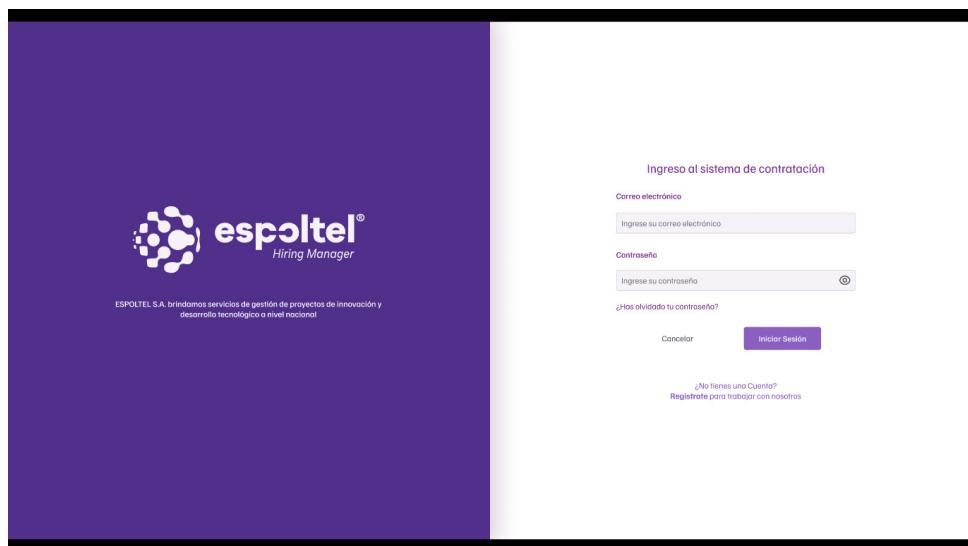


Figure 8.4: System login view

1  
Información base  
2  
Correo Electrónico  
3  
Confirmación

Registro al sistema de contratación

Primer Nombre \* Segundo Nombre (Opcional)

Ingrés su primer nombre Ingrés su segundo nombre

Primer Apellido \* Segundo Apellido (Opcional)

Ingrés su primer apellido Ingrés su segundo apellido

Número de cédula \* Sexo \*

Ingrés su cédula Elija una opción

Número de teléfono \*

Ingrés su número telefónico

Cancelar Siguiente

¿Ya tienes una Cuenta? [Inicia Sesión](#)

Figure 8.5: System registration view, step one: basic information

1  
Información base  
2  
Correo Electrónico  
3  
Confirmación

Registro al sistema de contratación

Correo electrónico \*

Ingrés su correo electrónico

Contraseña \*

Ingrés su contraseña

Confirmar contraseña \*

Ingrés su contraseña

Al crear su cuenta, usted acepta nuestros términos y política de privacidad

Volver Siguiente

¿Ya tienes una Cuenta? [Inicia Sesión](#)

Figure 8.6: System registration view, step two: entering email address

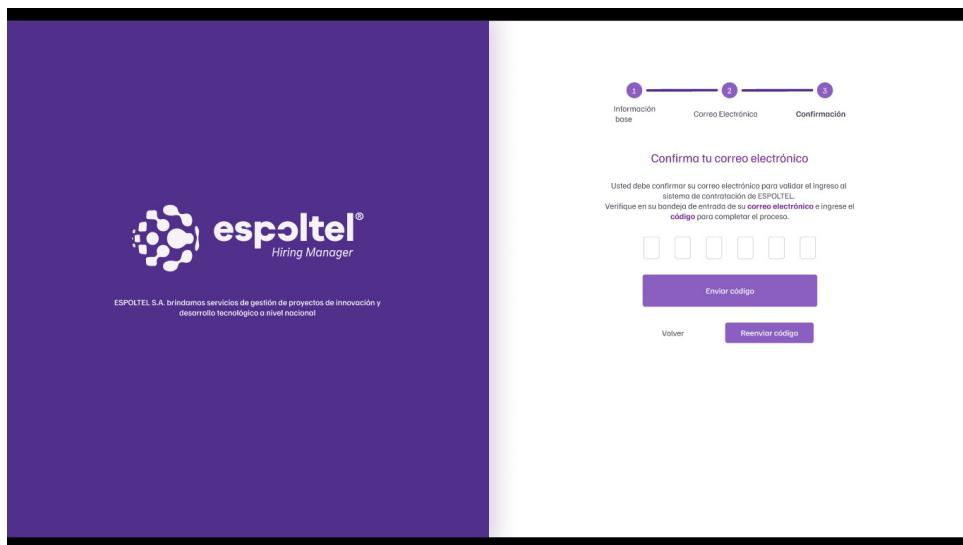


Figure 8.7: System registration view, step three: email confirmation

Nombre	Descripción	Personal	Fecha de ejecución	Estado
Projecto1	... vestibulum. Etiam nibh locus, dictum et varius ac, fermentum eu velit.	1/10 	06/24/2021 - 06/24/2021	<input type="radio"/> No ejecutado
Projecto2	... vestibulum. Etiam nibh locus, dictum et varius ac, fermentum eu velit.	1/10 	06/24/2021 - 06/24/2021	<input checked="" type="radio"/> En ejecución
Projecto3	... vestibulum. Etiam nibh locus, dictum et varius ac, fermentum eu velit.	1/10 	06/24/2021 - 06/24/2021	<input checked="" type="radio"/> Completado
Projecto4	... vestibulum. Etiam nibh locus, dictum et varius ac, fermentum eu velit.	1/10 	06/24/2021 - 06/24/2021	<input checked="" type="radio"/> En ejecución
Projecto5	... vestibulum. Etiam nibh locus, dictum et varius ac, fermentum eu velit.	1/10 	06/24/2021 - 06/24/2021	<input type="radio"/> No ejecutado
Projecto6	... vestibulum. Etiam nibh locus, dictum et varius ac, fermentum eu velit.	1/10 	06/24/2021 - 06/24/2021	<input type="radio"/> No ejecutado

Figure 8.8: View of all projects of a director

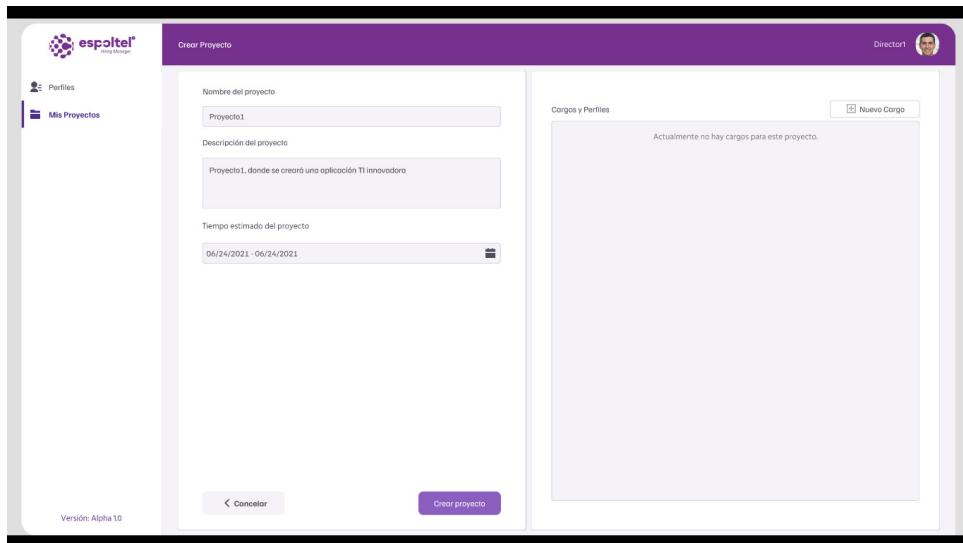


Figure 8.9: View of the creation of a project by a director

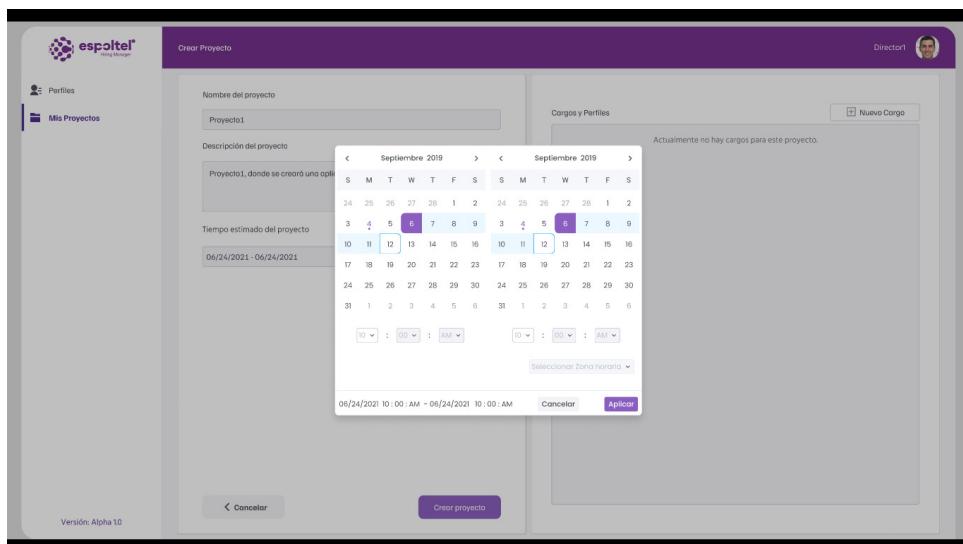


Figure 8.10: View of the selection of a project's estimated timeline

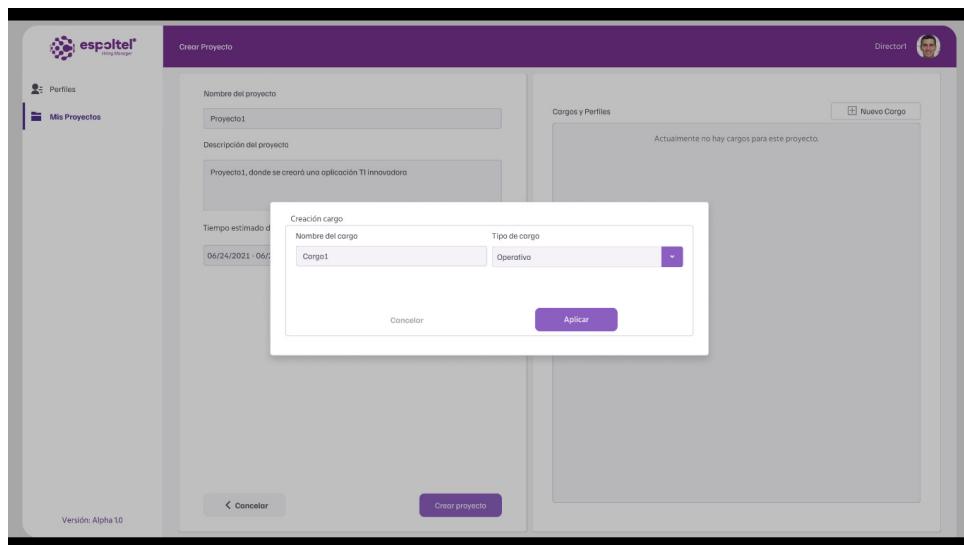


Figure 8.11: View of the creation of a project position

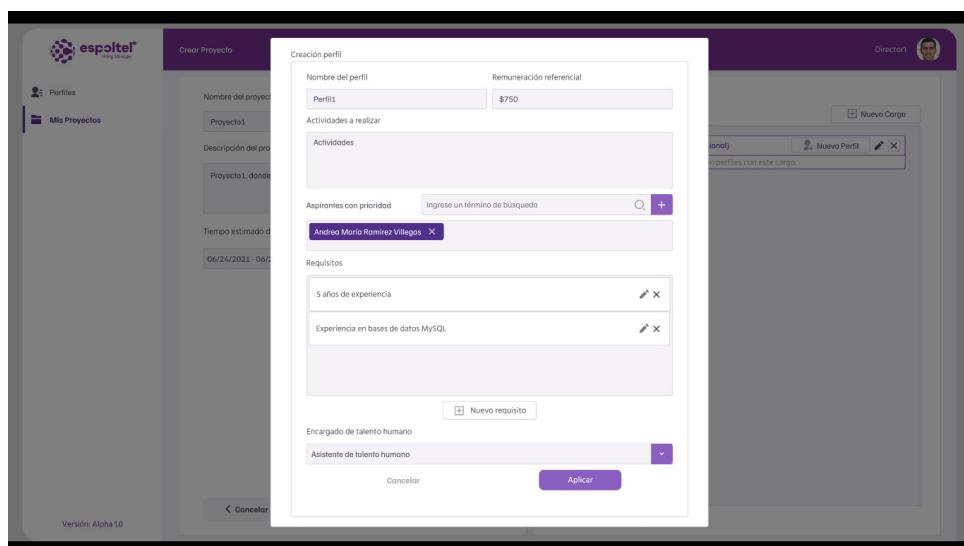


Figure 8.12: View of the creation of a project profile

Figure 8.13: Project view with roles and profiles

Foto	Nombre (ID)	Cargo	Perfil	Salario Referencial	Estado contratación
	Andressa Maria Románov Villegas 0958161168	Programador	Programador Junior	\$700 - 800	<span style="color: green;">● Completado</span>
	Andrés Juan Motomoros Maza 0958161168	Programador	Programador Senior	\$900 - 1200	<span style="color: purple;">● Pendiente Firma Aspirante</span>
	David Jorge Guanizo Rodríguez 0958161168	Analista	Analista de riesgo	\$700 - 800	<span style="color: purple;">● Pendiente Entrevista</span>

Foto	Nombre (ID)	Relación Laboral	Cargo	Perfil	Salario	Periodo contrato	Contrato
	Director1 0958161168	Dependencia	Director	Director Proyecto	\$1.500	<span style="color: grey;">1/12/2024 - 1/2/2025</span>	<span style="color: blue;">● Ver contrato</span>
	Cristina Sondra Ruiz Ollique	Dependencia	Programador	Programador Senior	\$1.200	<span style="color: grey;">1/12/2024 - 1/2/2025</span>	<span style="color: blue;">● Ver contrato</span>

Figure 8.14: View of detailed project information

The screenshot shows a list of aspirants for 'Projecto1 / Aspirantes'. The table has columns: Foto, Nombre (ID), Cargo, Perfil, Salario Referencial, and Estado contratación.

Foto	Nombre (ID)	Cargo	Perfil	Salario Referencial	Estado contratación
	Andrey Mario Romírez Villegas 0958161168	Programador	Programador Junior	\$700 - 800	<span style="color: blue;">● Completado</span>
	Andres Juan Motomoros Maza 0958161168	Programador	Programador Senior	\$900 - 1200	<span style="color: purple;">● Pendiente Firma Aspirante</span>
	David Jorge Guarino Rodriguez 0958161168	Analista	Analista de riesgos	\$700 - 800	<span style="color: purple;">● Pendiente Entrevista</span>

Version: Alpha 10

Figure 8.15: View of aspirants that have applied for a project

The screenshot shows the 'Projecto1 / Editor' view. On the left, there are fields for Nombre del proyecto (Projecto1), Descripción del proyecto (Projecto1, donde se creará una aplicación TI innovadora), and Tiempo estimado del proyecto (06/24/2021 - 06/24/2021). On the right, there is a section titled 'Perfiles creados' with a table:

Perfil	Cantidad	Estado
Programador Web Senior	3/10	<span style="color: purple;">● En Contratación</span>
Programador Junior	10/10	<span style="color: blue;">● Completado</span>

Below this is a 'Agregar Cargos y Perfiles' section with a table:

Cargo	Perfil	Opciones
Programador (1 Perfiles) (Operacional)	Nuevo Perfil	<span style="color: purple;">●</span>

Version: Alpha 10

Figure 8.16: View of a project edition

Foto	Nombre (ID)	Relación Laboral	Cargo	Perfil	Salarío	Periodo contrato	Contrato
	Director1 0958161168	Dependencia	Director	Director Proyecto	\$ 1.500	1/12/2024 a 1/2/2025	<a href="#">Ver contrato</a>
	Cristino Sondra Ruiz Ollogue 0958161168	Dependencia	Programador	Programador Senior	\$ 1.200	1/12/2024 a 1/2/2025	<a href="#">Ver contrato</a>

Versión: Alpha 10

Figure 8.17: View of contracted personnel of a project

Campos Guasico Galindo Espo Km 30 ½ Vía Perimetral  
Guayaquil-Ecuador Teléfono (934) 2289748

FT04-V01/PRO-UH-001

**EL PRESTADOR DE SERVICIOS** queda sometido a la Constitución de la República del Ecuador, a la Ley Orgánica del Sistema Nacional de Registro de Datos Públicos, a las Leyes y reglamentos relacionados con la materia, principalmente, queda advertido de las sanciones penales que para estos casos establece la legislación ecuatoriana.

**CLAUSULA SEXTA - PROPIEDAD INTELECTUAL**  
Toda la información, productos y servicios generados por EL PRESTADOR DE SERVICIOS, relacionados con el trabajo a ejecutarse serán de propiedad de ESPOTEL S.A.

Los derechos de propiedad intelectual de la información que pertenezcan a ESPOTEL no podrán ser revelados por EL PRESTADOR DE SERVICIOS para su reproducción parcial o total; así como su comunicación pública y distribución.

En caso de que la información resulte revelada, divulgada o utilizada por EL PRESTADOR DE SERVICIOS de cualquier forma distinta al objeto de este Acuerdo, ya sea de forma dolosa o por mera negligencia, será sancionado de acuerdo a las leyes vigentes para el efecto.

EL PRESTADOR DE SERVICIOS se obliga a entregar cualquier documentación, antecedentes facilitado en cualquier tipo de soporte y, en su caso, las copias obtenidas de los mismos, que constituyan información amparada por el deber de confidencialidad objeto del presente Acuerdo en el supuesto de que cese la relación entre las partes por cualquier motivo.

**CLAUSULA SÉPTIMA - INCUMPLIMIENTO:**  
En caso que EL PRESTADOR DE SERVICIOS incumpliere las estipulaciones del presente instrumento, será sancionado administrativamente, sin perjuicio de las responsabilidades civiles y penales a que hubiere lugar.

**CLAUSULA OCTAVA - DECLARACIONES**  
EL PRESTADOR DE SERVICIOS declara y acepta de manera libre y voluntaria que la

Versión: Alpha 10

Figure 8.18: View of the personnel contract file

The screenshot shows a web interface for managing profiles. At the top, there's a purple header bar with the espoltel logo and a search bar. Below the header, a sidebar on the left has 'Perfiles' and 'Mis Proyectos' buttons. The main content area is titled 'Perfiles' and contains a table with columns: 'Proyecto', 'Cargo', 'Perfil', 'Comidad personal', and 'Estado'. The table lists several entries:

Proyecto	Cargo	Perfil	Comida personal	Estado
Doster Consultores	Programador	Programador Senior	3/10 Aspirantes	● En Contratación
Doster Consultores	Programador	Programador Junior	3/10 Aspirantes	● En Contratación
Reciclo Electronic	Analista	Analista Financiero	8/8 Aspirantes	● Completado
Doster Consultores	Ingeniero de Software	Scrum Master	2/5 Aspirantes	● En Contratación
Reciclo Electronic	Programador	Programador Senior	5/5 Aspirantes	● Completado
Reciclo Electronic	Analista	Analista de riesgos	0/10 Aspirantes	● En Revisión

At the bottom of the page, there's a footer with 'Versión: Alpha 10' and a navigation bar.

Figure 8.19: View of all profiles managed by a director

This screenshot shows a detailed view of a profile. The top bar is purple with the espoltel logo and a search bar. The sidebar on the left has 'Perfiles' and 'Mis Proyectos' buttons. The main content area is titled 'Perfiles / Programador Senior' and shows a table for 'Proyecto: Proyecto1'. The table has columns: 'Foto', 'Nombre (ID)', and 'Estado contratación'. It lists three candidates:

Foto	Nombre (ID)	Estado contratación
	Andres Maria Ramirez Villegas 09581611168	● Completado
	Andres Juan Motomono Mizra 09581611168	● Pendiente Firma Aspirante
	David Jorge Guernizo Rodriguez 09581611168	● Pendiente Firma Gerente

At the bottom of the page, there's a footer with 'Versión: Alpha 10' and a navigation bar.

Figure 8.20: View of a profile with its postulations in detail

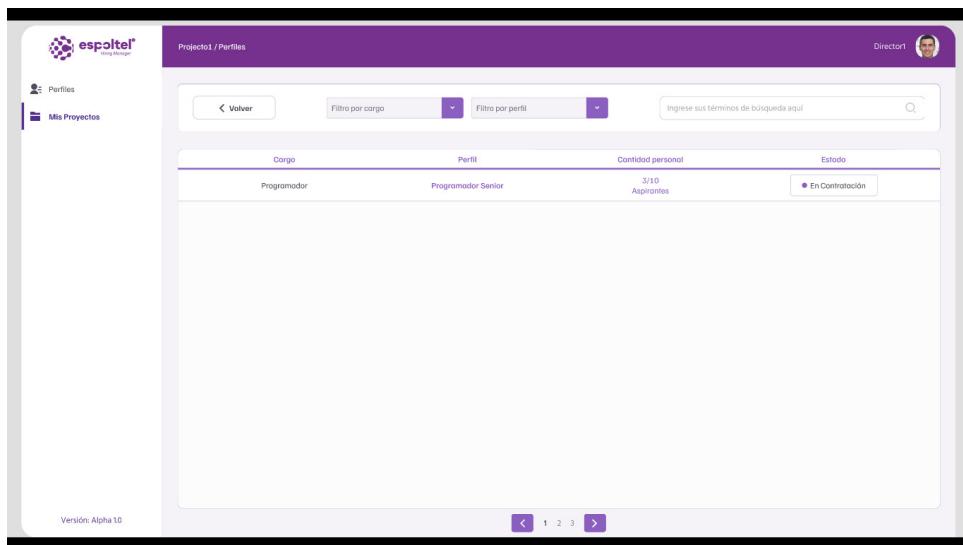


Figure 8.21: View of project profiles

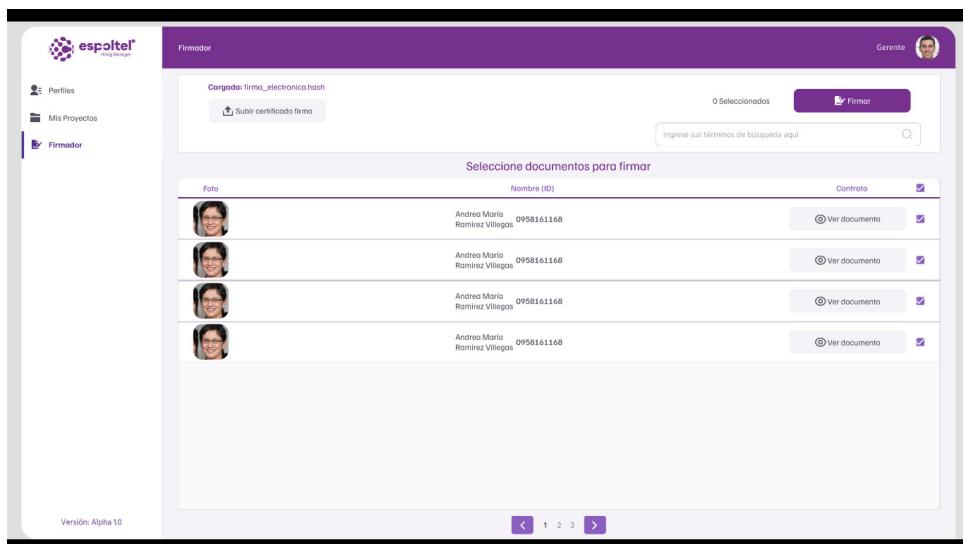


Figure 8.22: View of the manager's document signer

Proyecto	Cargo	Perfil	Comitad personal	Estado
Doster Consultores	Programador	Programador Senior	0/10 Aspirantes	● En Revisión
Doster Consultores	Programador	Programador Junior	0/10 Aspirantes	● En Revisión
Reciclo Electronic	Analista	Analista Financiero	0/8 Aspirantes	● En Revisión
Doster Consultores	Ingeniero de Software	Scrum Master	0/5 Aspirantes	● En Revisión
Reciclo Electronic	Programador	Programador Senior	0/5 Aspirantes	● En Revisión
Reciclo Electronic	Analista	Analista de riesgos	0/10 Aspirantes	● En Revisión

Figure 8.23: View of profiles pending review by human talent

Nombre del cargo: Programador

Tipo de cargo: Operativo

Nombre del perfil: Programador Senior

Remuneración referencial: \$750

Actividades a realizar:

- Programar en back-end del sistema de contratación de ESPOTEL S.A.

Aplicantes recomendados:

- Alejandra María Ramírez Villegas

Requisitos:

- 5 años de experiencia
- CSS, HTML, y Javascript Avanzado
- Inglés B2
- Trabajo en equipo
- Experiencia en SQL

Figure 8.24: View a profile revision to edit and accept it

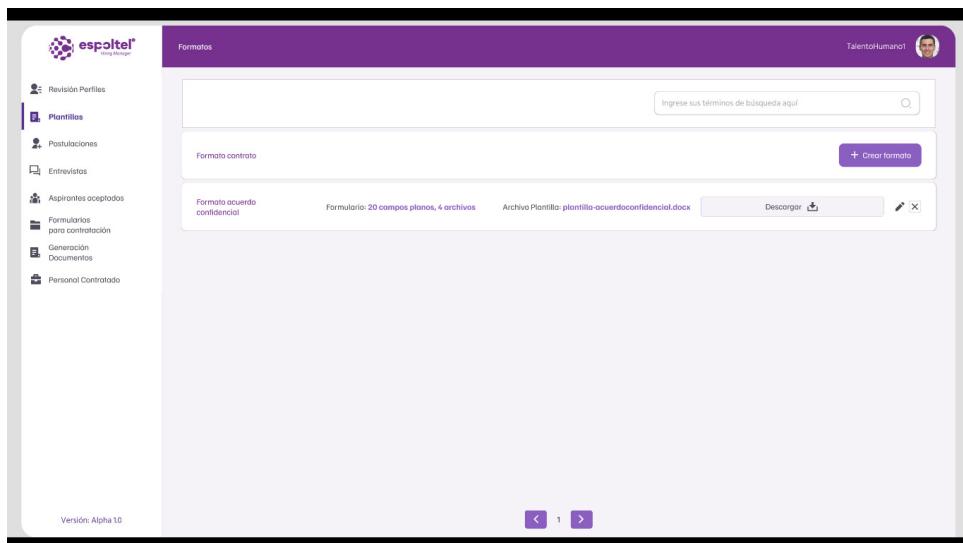


Figure 8.25: View of contract and confidential agreement formats

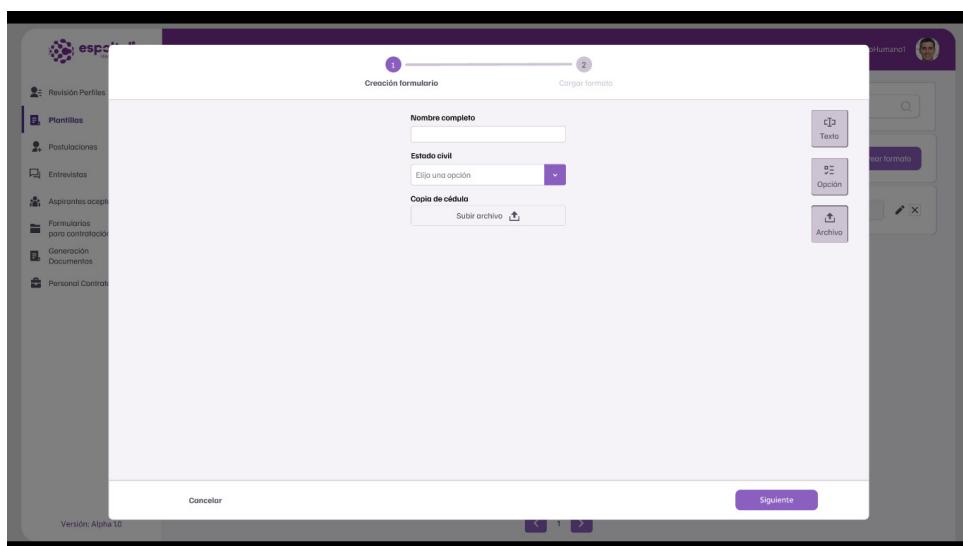


Figure 8.26: View of the format creation, step one: create form

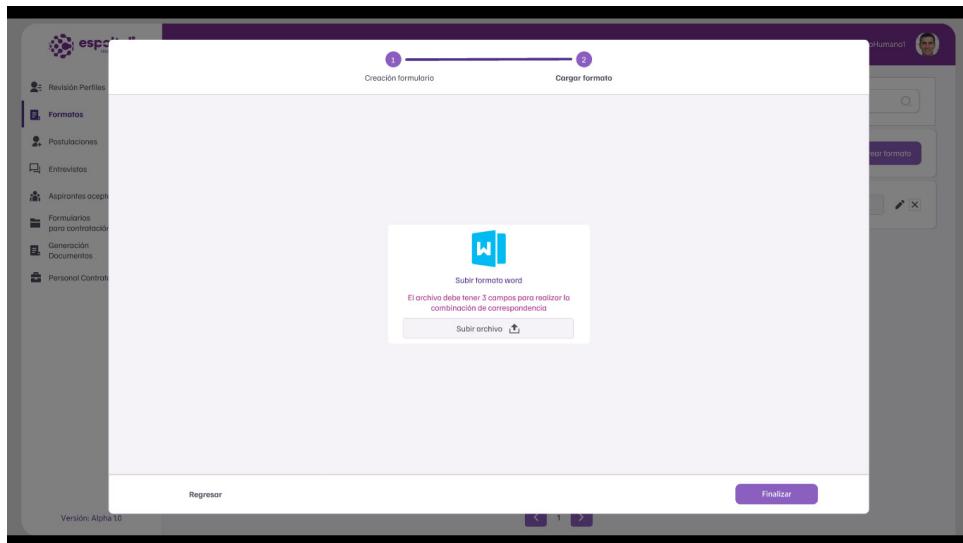


Figure 8.27: View of the format creation, step two: upload the word file

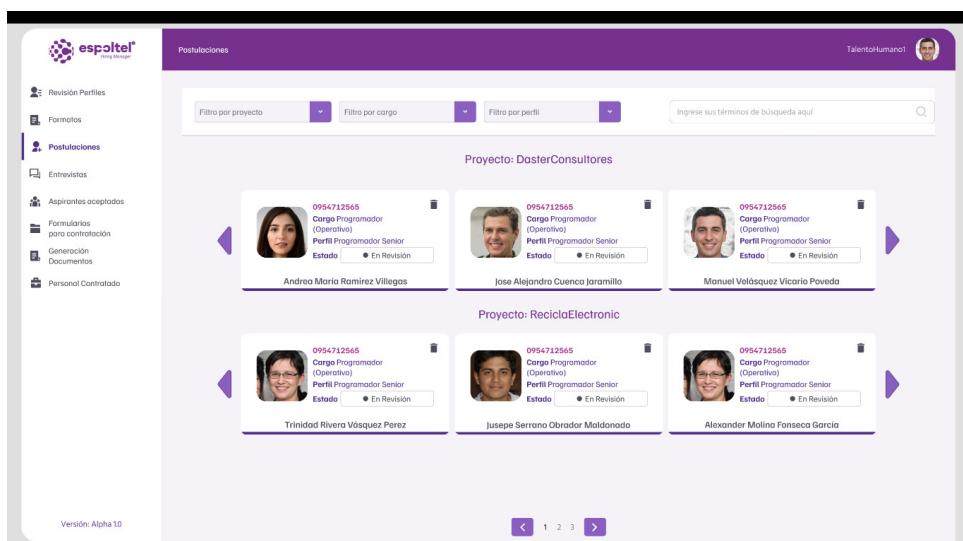


Figure 8.28: View of incoming postulations

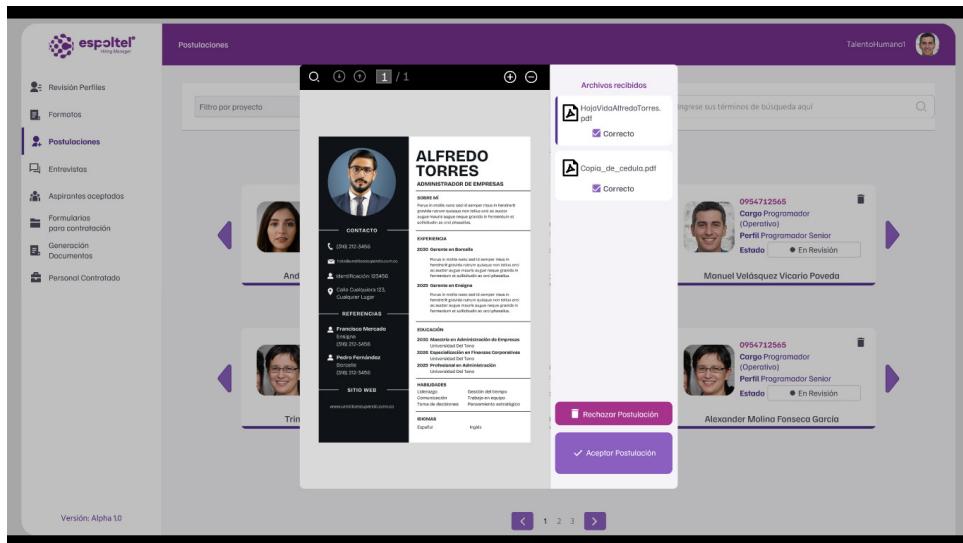


Figure 8.29: View validation of documents to accept a postulation under review

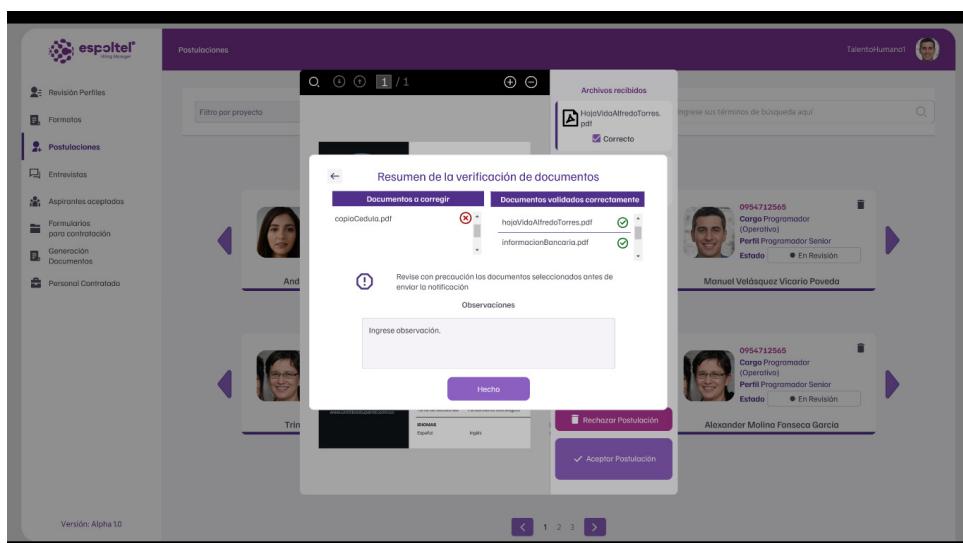


Figure 8.30: View of the result of the validation of the postulation to notify the result

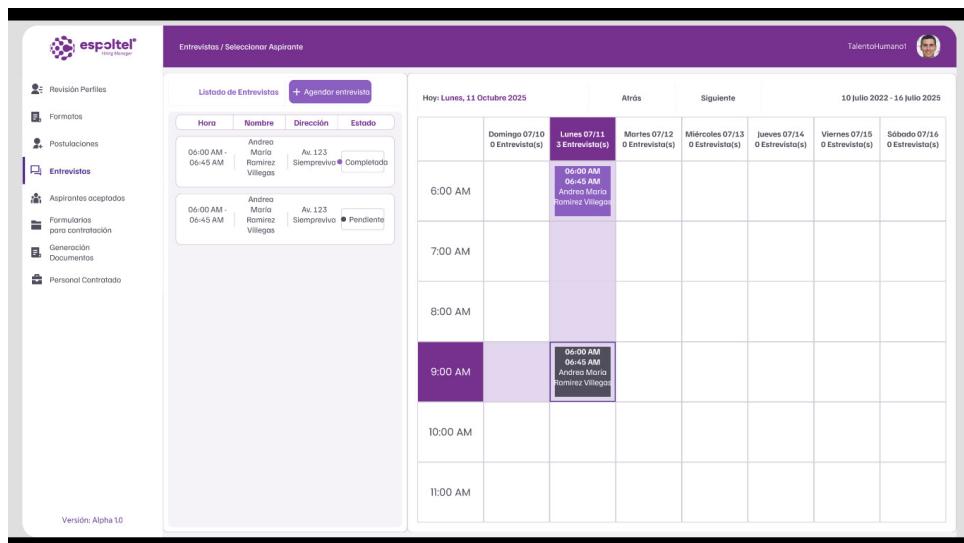


Figure 8.31: View of the interviews

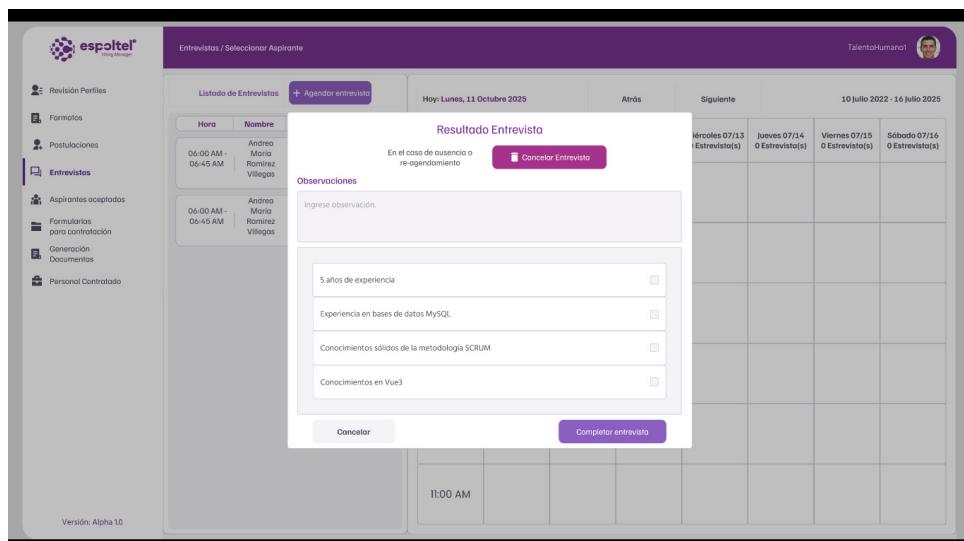


Figure 8.32: View of the results of an interview

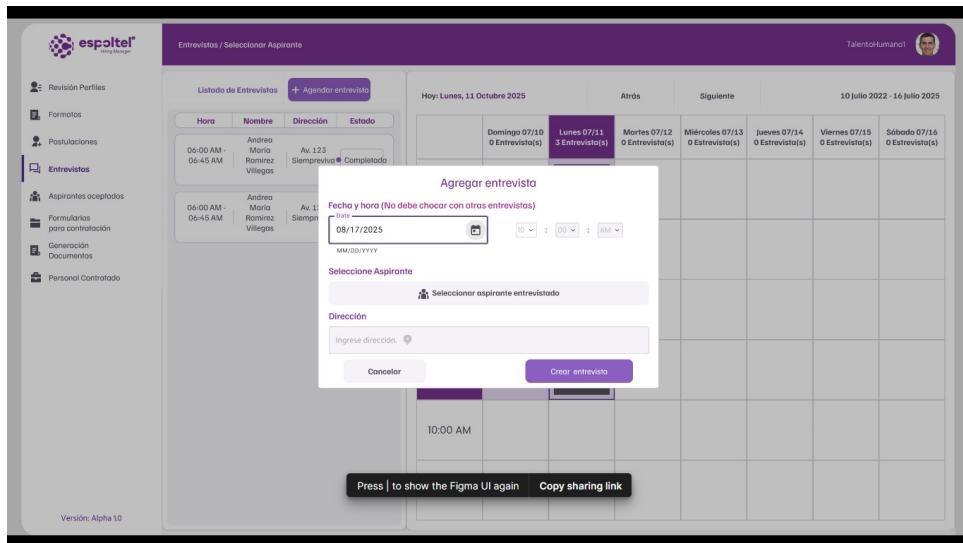


Figure 8.33: View of an interview schedule

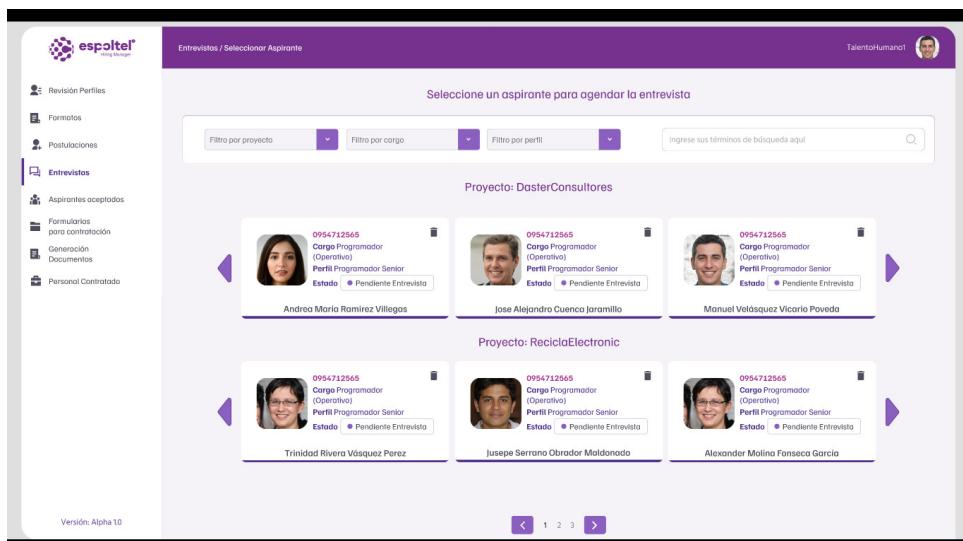


Figure 8.34: View of the choice of aspirant to interview

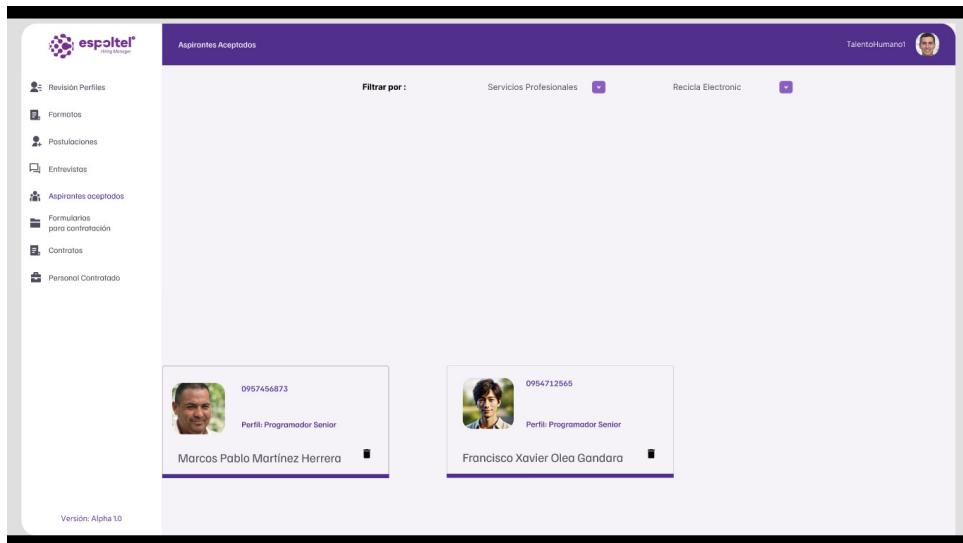


Figure 8.35: View of aspirants interviewed

**EXPERIENCIA PROFESIONAL**

- Desarrollador de Software | Google Colombia  
Enero 20XX - Abril 20XX | Bogotá
  - Diseño e implementación de soluciones.
  - Desarrollo de aplicaciones web y móvil utilizando tecnologías como Java, Python y JavaScript.
  - Colaboración en proyectos de inteligencia artificial y aprendizaje automático.
  - Participación en la planificación y ejecución de estrategias de desarrollo de software.

**IDIOMAS**

- Español: Native
- Inglés: Intermedio
- Francés: Básico

**HABILIDADES**

- Programación en Java
- Gestión de bases de datos
- Desarrollo de aplicaciones
- Uso avanzado de Excel

**FORMACIÓN ACADÉMICA**

- INGENIERÍA DE SISTEMAS | Bancolombia  
Julio 20XX - Sept. 20XX | Bogotá
  - Mantenimiento y actualización de sistemas de gestión bancaria.
  - Desarrollo de herramientas internas para optimizar procesos administrativos.
  - Análisis de datos y generación de reportes para la toma de decisiones.
  - Implementación de medidas de seguridad informática.
- CURSO DE DESARROLLO DE APLICACIONES  
Abril 20XX - Agosto 20XX | Bogotá
- DIPLOMADO EN SEGURIDAD INFORMATICA  
Diciembre 20XX - Octubre 20XX | Bogotá

Figure 8.36: View of a postulation for acceptance or rejection

The screenshot shows a web interface titled "Formularios para contratación". On the left, there is a sidebar with various menu items: Revisión Perfiles, Formatos, Postulaciones, Entrevistas, Aspirantes aceptados, Formularios para contratación (which is selected and highlighted in purple), Generación de documentos, and Personal Contratado. The main content area displays a table with the following data:

Proyecto	Cargo	Perfil	Comitad personal	Estado
Daster Consultores	Programador	Programador Senior	5/10 Aspirantes	● En Contratación
Daster Consultores	Programador	Programador Junior	7/10 Aspirantes	● En Contratación
Reciclo Electronic	Analista	Analista Financiero	8/8 Aspirantes	● Completado
Daster Consultores	Ingeniero de Software	Scrum Master	3/5 Aspirantes	● En Contratación
Reciclo Electronic	Programador	Programador Senior	6/5 Aspirantes	● En Contratación
Reciclo Electronic	Analista	Analista de riesgos	7/10 Aspirantes	● En Contratación

At the bottom left is the text "Versión: Alpha 10". At the bottom right are navigation arrows and page numbers (1, 2, 3).

Figure 8.37: View of all profiles in hiring

This screenshot shows a detailed view of a postulation for a profile. The top navigation bar includes "Formularios para contratación / Programador Senior (Daster Consultores)". The sidebar on the left is identical to Figure 8.37. The main form contains the following fields:

- Remuneración: \$750
- Relación de Servicio: Relación de dependencia (dropdown) and Jornada completa (dropdown)
- Tiempo de contratación: 6 Meses
- Aplicantes recomendados: Andrea María Ramírez Villegas (highlighted in blue)
- Requisitos:
  - 5 años de experiencia
  - Experto en metodología SCRUM
  - Inglés C2
- Exámenes preocupacionales: sin asignar.

At the bottom are "Siguiente" and "Guardar Información" buttons. To the right, three profile cards are displayed for Andrea María Ramírez Villegas, each with a different ID (0954712565, 0954712566, 0954712567), their roles (Programador Senior), and their status (Estado: ● Pendiente Documentos). The bottom right corner shows the name "Andrea María Ramírez Villegas".

Figure 8.38: View of the hiring information of a postulation to a profile to save the information.

**Formulario de contratación**

**ALFREDO TORRES**  
ADMINISTRADOR DE EMPRESAS

**CONTACTO**

**EDUCACIÓN**

**REFERENCIAS**

**SÍTIOS WEB**

**EXPERIENCIA**

**HOJA DE VIDA**

**Archivos recibidos**

**Versión: Alpha 10**

Figure 8.39: View of the hiring form received from the aspirant along with his files for hiring.

**Resumen de la verificación de documentos**

**Documentos a corregir:** copiaCedula.pdf

**Documentos validados correctamente:** hojaVidaAlfredoTorres.pdf, informacionBancaaria.pdf

**Observaciones:** Ingrese observación.

**Hecho**

**Archivos recibidos**

**Versión: Alpha 10**

Figure 8.40: View of the verification of the contract form

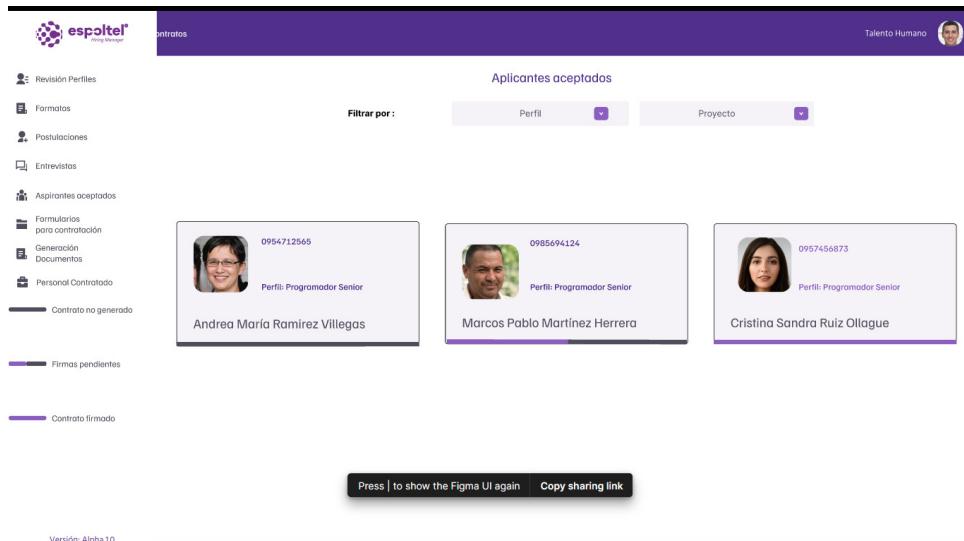


Figure 8.41: View of postulations with pending contracts

This screenshot shows a detailed view of an application ('Aplicante') for contract generation. The left sidebar is identical to Figure 8.41. The right side displays the applicant's information and various input fields:

- Nombre completo:** Maritza Ángeles Guerrero Aguilar
- Cédula de identidad:** 0999999999
- Correo electrónico:** mogular@tsc.com
- Teléfono:** 0999999999
- Estado civil:** Casada
- Fecha de nacimiento:** 23/05/1966
- Nivel de estudio:** P.D. en Inteligencia Artificial
- País:** Ecuador
- Provincia:** Pichincha
- Ciudad:** Quito
- Género:** Femenino
- Etnia:** Mestizo/a
- Hijos:** 3
- Discapacidad:** No
- Grado de discapacidad:** 0
- Banco:** Elige una opción
- No. cuenta:** 4500640943
- Tipo de cuenta:** Elige una opción

At the bottom are buttons for 'Rgresar' and 'Generar Documento'.

Figure 8.42: View of the contract generation of an application

**espoltel** WingManager

Contratos

**Aplicante**

FT04-V01/PRO-URH-001

**EL PRESTADOR DE SERVICIOS** queda sometido a la Constitución de la República del Ecuador, a la Ley Orgánica del Sistema Nacional de Registro de Datos Públicos, a las Leyes y reglamentos relacionados con la materia, principalmente, queda advertido de las sanciones penales que para estos casos establece la legislación ecuatoriana.

**CLAUSULA SEXTA. - PROPIEDAD INTELECTUAL**  
Toda la información, productos y servicios generados por EL PRESTADOR DE SERVICIOS, relacionados con el trabajo a ejecutarse serán de propiedad de ESPOLTEL S.A.

Los derechos de propiedad intelectual de la información que pertenezcan a ESPOLTEL no podrán ser revelados por EL PRESTADOR DE SERVICIOS para su reproducción parcial o total; así como su comunicación pública y distribución.

En caso de que la información resulte revelada, divulgada o utilizada por EL PRESTADOR DE SERVICIOS de cualquier forma distinta al objeto de este Acuerdo, ya sea de forma dolosa o por mera negligencia, será sancionado de acuerdo a las leyes vigentes para el efecto.

EL PRESTADOR DE SERVICIOS se obliga a entregar cualquier documentación, antecedente facilitado en cualquier tipo de soporte y, en su caso, las copias obtenidas de los mismos, que constituyan información amparada por el deber de confidencialidad objeto del presente Acuerdo en el supuesto de que cese la relación entre las partes por cualquier motivo.

**CLAUSULA SÉPTIMA. - INCUMPLIMIENTO:**  
En caso que EL PRESTADOR DE SERVICIOS incumpliere las estipulaciones del presente instrumento, será sancionado administrativamente, sin perjuicio de las responsabilidades civiles y penales a que hubiere lugar.

**CLAUSULA OCTAVA. - DECLARACIONES**  
EL PRESTADOR DE SERVICIOS declara y acepta de manera libre y voluntaria que la Institución a la que pertenece inicie las acciones administrativas, civiles y penales que correspondan, en caso de que se determine que se ha vendido o intercambiado información no autorizada, así como que se ha visualizado o usado información de ESPOLTEL S.A. sin que se cuente con los justificativos, sustentos y autorización del caso.

Nombre completo: Moritz Ángeles Guerrero Aguirar  
Cédula de identidad: 0999999999  
Correo electrónico: mogollar@tsc.com  
Teléfono: 0999999999  
Estado civil: Elige una opción  
Fecha de nacimiento: 23/05/1966  
Nivel de estudio: PRD en Inteligencia Artificial  
País: Ecuador  
Provincia: Pichincha  
Ciudad: Quito  
Género: Femenino  
Etnia: Mestizo/a  
Hijos: 3  
Discapacidad: No  
Grado de discapacidad: 0  
Banco: Elige una opción  
No. cuenta: 4500540943  
Tipo de cuenta: Elige una opción  
Generar contrato  
Regresar

Versión: Alpha 1.0

Figure 8.43: View of the generated contract to be sent to the aspirant

**espoltel** WingManager

Contratos

**Contrato**

FT04-V01/PRO-URH-001

**EL PRESTADOR DE SERVICIOS** queda sometido a la Constitución de la República del Ecuador, a la Ley Orgánica del Sistema Nacional de Registro de Datos Públicos, a las Leyes y reglamentos relacionados con la materia, principalmente, queda advertido de las sanciones penales que para estos casos establece la legislación ecuatoriana.

**CLAUSULA SEXTA. - PROPIEDAD INTELECTUAL**  
Toda la información, productos y servicios generados por EL PRESTADOR DE SERVICIOS, relacionados con el trabajo a ejecutarse serán de propiedad de ESPOLTEL S.A.

Los derechos de propiedad intelectual de la información que pertenezcan a ESPOLTEL no podrán ser revelados por EL PRESTADOR DE SERVICIOS para su reproducción parcial o total; así como su comunicación pública y distribución.

En caso de que la información resulte revelada, divulgada o utilizada por EL PRESTADOR DE SERVICIOS de cualquier forma distinta al objeto de este Acuerdo, ya sea de forma dolosa o por mera negligencia, será sancionado de acuerdo a las leyes vigentes para el efecto.

EL PRESTADOR DE SERVICIOS se obliga a entregar cualquier documentación, antecedente facilitado en cualquier tipo de soporte y, en su caso, las copias obtenidas de los mismos, que constituyan información amparada por el deber de confidencialidad objeto del presente Acuerdo en el supuesto de que cese la relación entre las partes por cualquier motivo.

**CLAUSULA SÉPTIMA. - INCUMPLIMIENTO:**  
En caso que EL PRESTADOR DE SERVICIOS incumpliere las estipulaciones del presente instrumento, será sancionado administrativamente, sin perjuicio de las responsabilidades civiles y penales a que hubiere lugar.

**CLAUSULA OCTAVA. - DECLARACIONES**  
EL PRESTADOR DE SERVICIOS declara y acepta de manera libre y voluntaria que la Institución a la que pertenece inicie las acciones administrativas, civiles y penales que correspondan, en caso de que se determine que se ha vendido o intercambiado información no autorizada, así como que se ha visualizado o usado información de ESPOLTEL S.A. sin que se cuente con los justificativos, sustentos y autorización del caso.

**Marcos Pablo Martínez Herrera**  
0957456873  
Cargo: Programador (Operativo)  
Perfil: Programador Senior  
Estado: ● Pendiente Firma Gerente

Solicitar nueva firma Verificar firma

Aplicante: 1/1  
Gerente: 0/1

Enviar Documento a gerente  
Regresar

Versión: Alpha 1.0

Figure 8.44: View of the contract signed by the aspirant ready to validate his signature, and send it to the manager

**Contrato**

FT04-V01/PRO-URH-001

**EL PRESTADOR DE SERVICIOS** queda sometido a la Constitución de la República del Ecuador, a la Ley Orgánica del Sistema Nacional de Registro de Datos Públicos, a las Leyes y reglamentos relacionados con la materia, principalmente, queda advertido de las sanciones penales que para estos casos establece la legislación ecuatoriana.

**CLAUSULA SEXTA - PROPIEDAD INTELECTUAL**

Todos la información, productos y servicios generados por EL PRESTADOR DE SERVICIOS, relacionados con el trabajo a ejecutarse serán de propiedad de ESPOTEL S.A.

Los derechos de propiedad intelectual de la información que pertenezcan a ESPOTEL NO podrán ser revendidos por EL PRESTADOR DE SERVICIOS para su reproducción parcial o total; así como su comunicación pública y distribución.

En caso de que la información resulte revelada, divulgada o utilizada por EL PRESTADOR DE SERVICIOS de cualquier forma distinta al objeto de este Acuerdo, ya sea de forma dolosa o por mera negligencia, será sancionado de acuerdo a las leyes vigentes para el efecto.

EL PRESTADOR DE SERVICIOS se obliga a entregar cualquier documento, antecedente facilitado en cualquier tipo de soporte y, en su caso, las copias obtenidas de los documentos que contengan información amparada por el deber de confidencialidad objeto del presente Acuerdo en el supuesto de que cese la relación entre las partes por cualquier motivo.

**CLAUSULA SÉPTIMA - INCUMPLIMIENTO:**

En caso que EL PRESTADOR DE SERVICIOS incumpliere las estipulaciones del presente instrumento, sera sancionado administrativamente, sin perjuicio de las responsabilidades civiles y penales a que hubiere lugar.

**CLAUSULA OCTAVA - DECLARACIONES**

EL PRESTADOR DE SERVICIOS declara voluntariamente que no tiene vínculos laborales ni de cualquier tipo con otra Institución a la que pertenece ni tiene las actitudes que se detallan a continuación. Si no respondean, en caso de que se detecten, se procederá a la sanción correspondiente, así como que se ha visualizado o usado información de ESPOTEL S.A. sin que se cuente con los justificativos, sustentos y autorización del caso.

Subir contrato

Regresar

Versión: Alpha 1.0

Figure 8.45: View of the contract signed by both parties to save it to the system

**Personal**

Foto	Nombre (ID)	Proyecto	Relación Laboral	Cargo	Perfil	Salario	Periodo controlo	Controlo
	Director1 0958161168	Proyecto1	Dependencia	Director	Director Proyecto	\$ 1.500	1/12/2024 a 1/2/2025	<a href="#">Ver contrato</a>
	Cristina Sandra Ruiz Ollague 0958161168	Proyecto2	Dependencia	Programador	Programador Senior	\$ 1.200	1/12/2024 a 1/2/2025	<a href="#">Ver contrato</a>

Versión: Alpha 1.0

Figure 8.46: View of all personnel hired by ESPOTEL

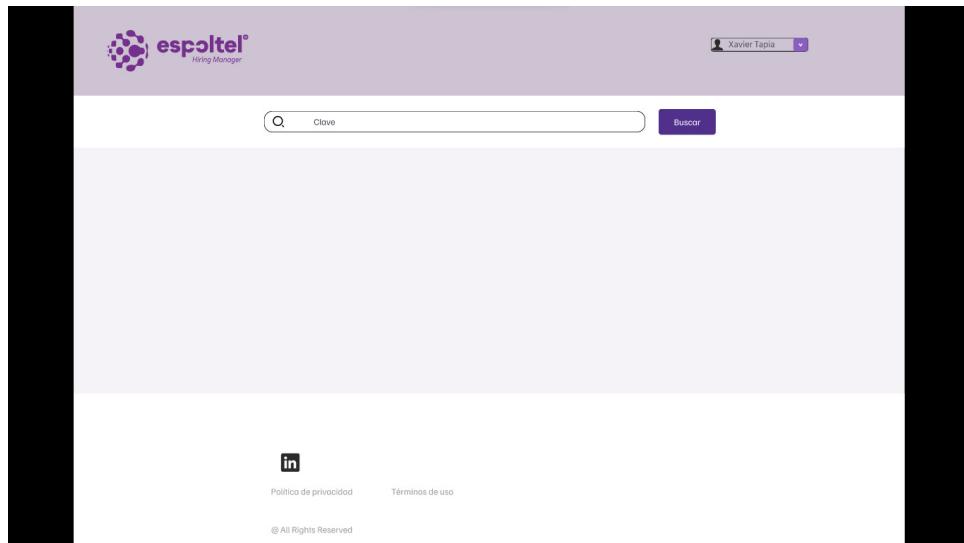


Figure 8.47: View of the aspirant's home page

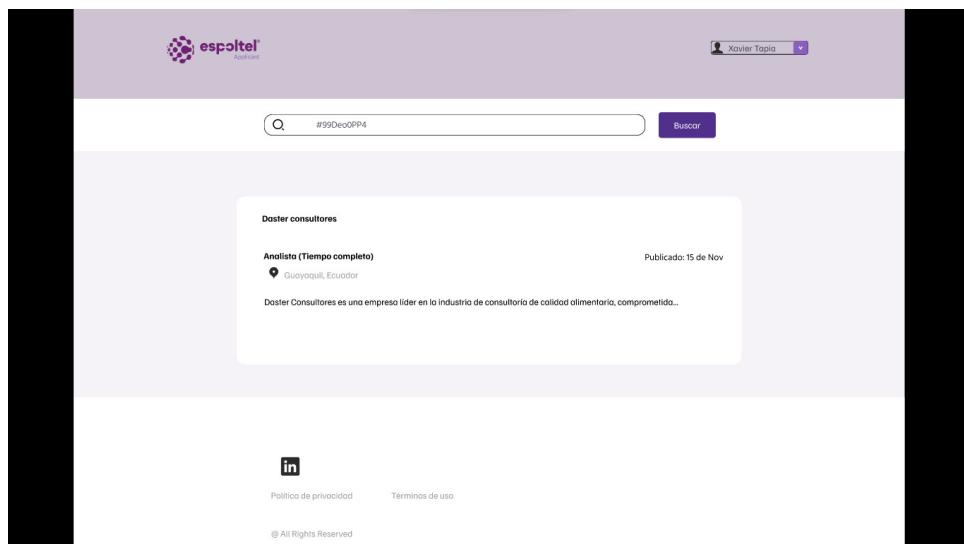


Figure 8.48: View of the code entry of a hiring profile

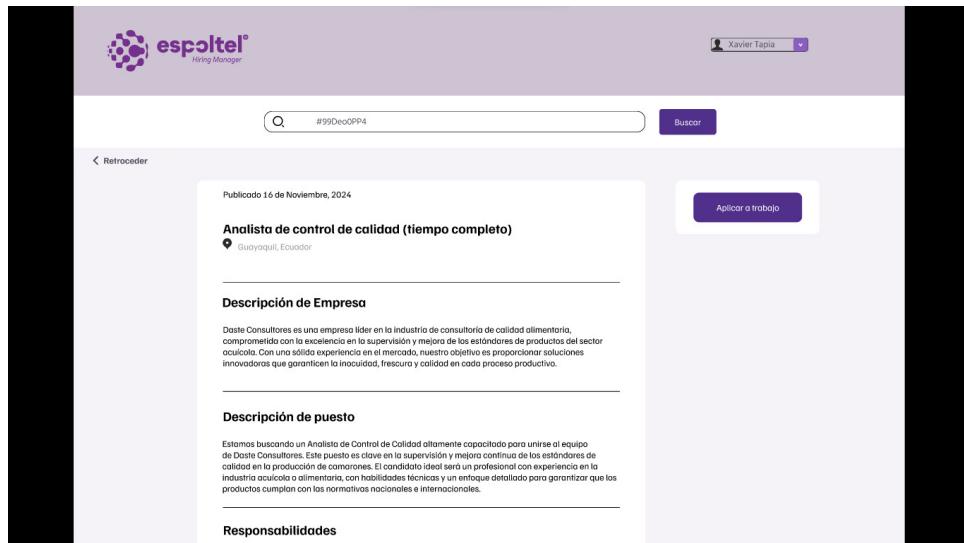


Figure 8.49: Detailed view of the position and profile to apply for the position

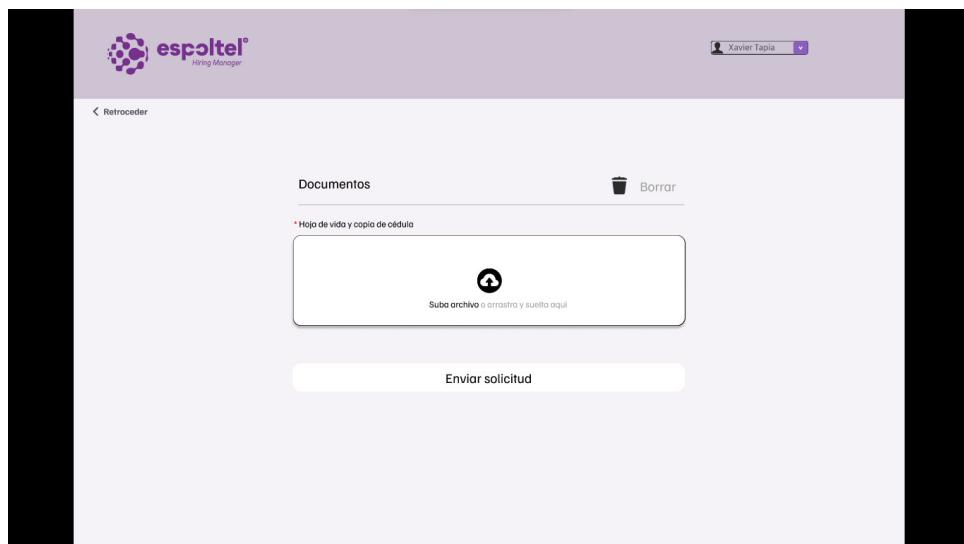


Figure 8.50: View to upload files needed for the initial application, resume and ID, part one

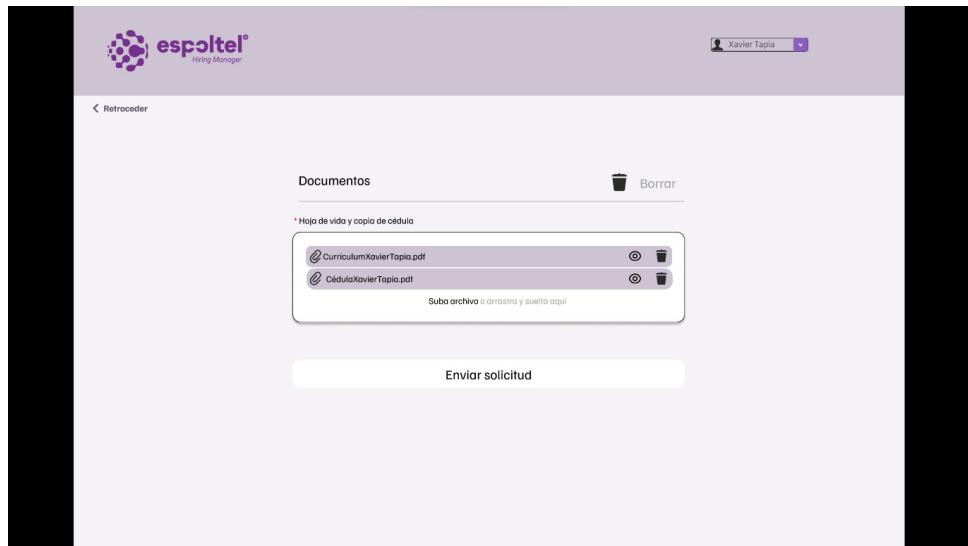


Figure 8.51: View to upload files needed for the initial application, resume and ID, part two

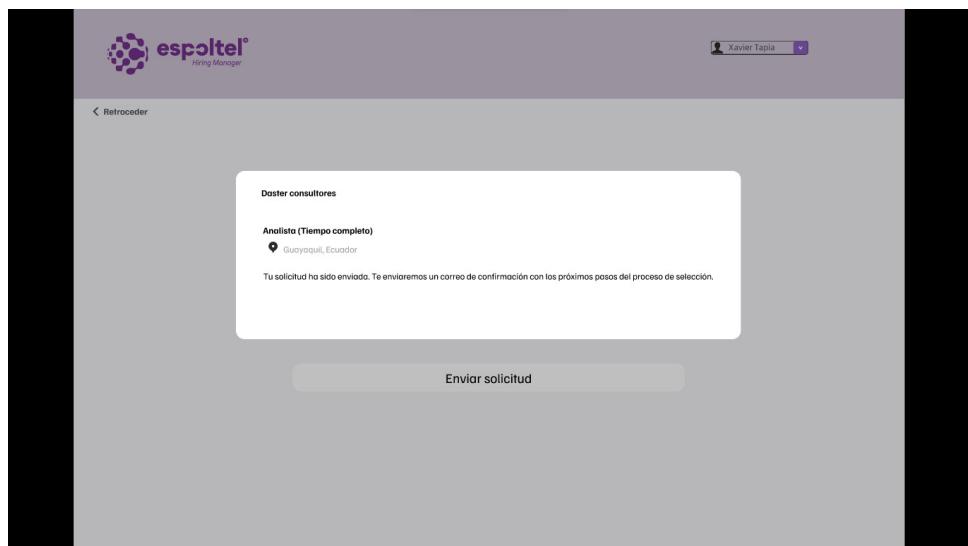


Figure 8.52: View of postulation confirmation

The screenshot shows the 'Información personal' (Personal Information) section of the espotel Hiring Manager interface. At the top right, there is a purple navigation bar with the user's name 'Xavier Tapia' and options: 'Administrar perfil', 'Postulaciones', and 'Cerrar sesión'. Below the navigation bar, there is a 'Modificar credenciales' (Change credentials) button and a 'Ver perfil' (View profile) button. The main form contains fields for personal information: 'Correo' (Email) with the value 'XavierTapia3@outlook.com', 'Primer nombre' (First name) with the value 'Xavier', 'Segundo nombre' (Last name) with the value 'Topia', 'Primer apellido' (First last name) with the value 'Topia', 'Segundo apellido' (Second last name) with the value 'Segundo apellido', 'Sexo' (Gender) with the value 'Masculino', and 'Teléfono' (Phone number) with the value '0938448211'. There is also a 'Cargar imagen' (Upload image) button next to a placeholder for a profile picture. At the bottom of the form is an 'Actualizar perfil' (Update profile) button.

Figure 8.53: View of user information

The screenshot shows the 'Modificar credenciales' (Change credentials) page. At the top right, there is a purple navigation bar with the user's name 'Xavier Tapia' and options: 'Administrar perfil', 'Postulaciones', and 'Cerrar sesión'. Below the navigation bar, there is a back arrow labeled '< Retroceder' (Back). The main form has fields for 'Correo' (Email) with a placeholder '.', 'Nueva Contraseña (dejar en blanco si no quiere cambiarla)' (New password (leave empty if you don't want to change it)), 'Contraseña de confirmación' (Confirmation password), and 'Contraseña actual' (Current password). At the bottom of the form is an 'Actualizar perfil' (Update profile) button.

Figure 8.54: View of email and credentials edition

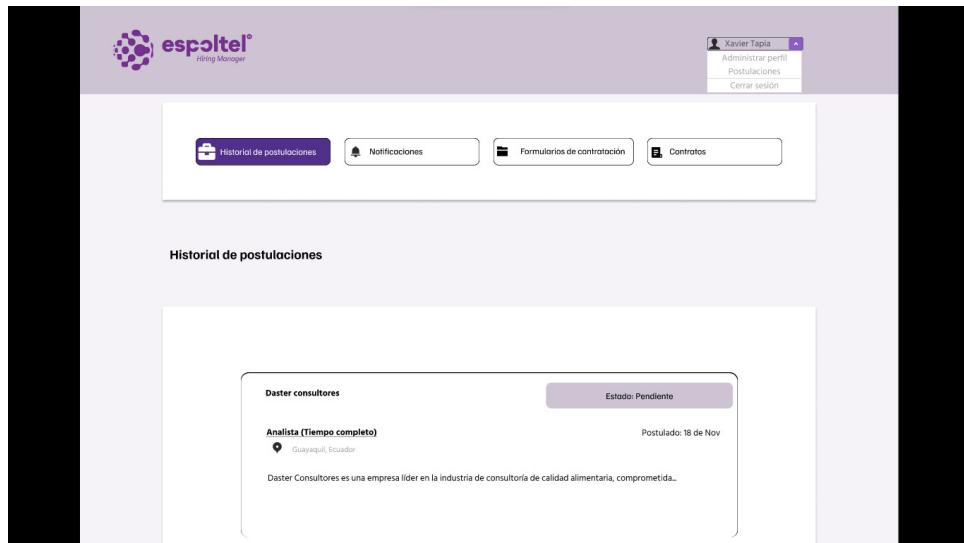


Figure 8.55: View of all postulations of an aspirant

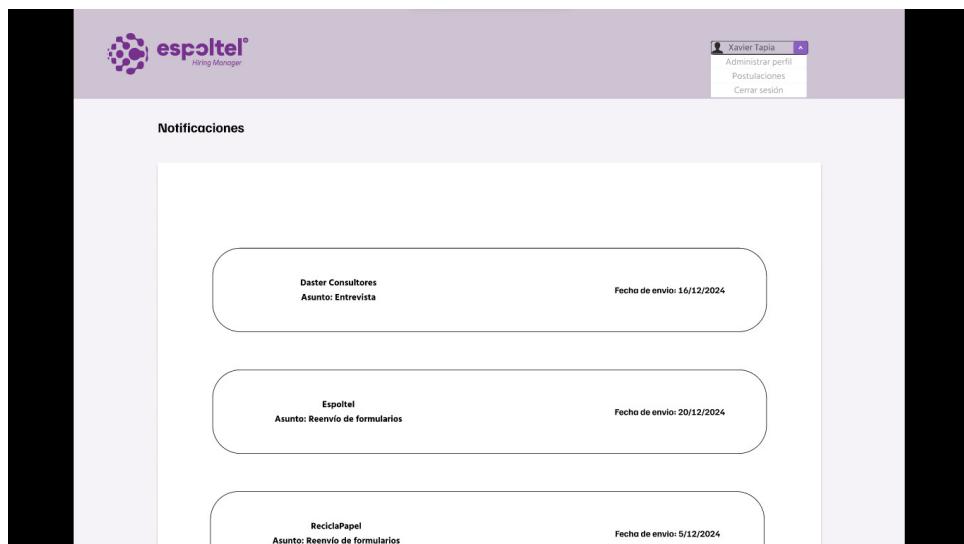


Figure 8.56: View of aspirant notifications

The screenshot shows the Espotel Hiring Manager web application. At the top, there is a purple header bar with the Espotel logo, the text "Hiring Manager", and a user profile menu for "Xavier Tapia" with options like "Administrar perfil", "Postulaciones", and "Cerrar sesión". Below the header, there are four navigation buttons: "Historial de postulaciones", "Notificaciones", "Formularios de contratación" (which is highlighted in blue), and "Contratos". The main content area is titled "Formularios de contratación" and displays two submitted forms:

- Daster Consultores**: A form with several input fields, but no specific data is visible.
- Espotel**: A form with several input fields, but no specific data is visible.

On the right side, there is a panel titled "Información Aspirante" (Applicant Information) containing the following data:

Nombre completo	Cédula de identidad
Andrea María Ramírez Villegas	095xxxxxxxx
Correo electrónico	Teléfono
villegas10@gmail.com	098xxxxxxxx
Estado civil	Fecha de nacimiento
Casado/a	11/11/1977
Nivel de estudio	País
Phd. Inteligencia Artificial	Ecuador
Provincia	Ciudad
Pichincha	Pichincha

Figure 8.57: View of submitted contract forms

The screenshot shows the Espotel Hiring Manager web application. At the top, there is a purple header bar with the Espotel logo, the text "Hiring Manager", and a user profile menu for "Xavier Tapia" with options like "Administrar perfil", "Postulaciones", and "Cerrar sesión". Below the header, there is a "Contratos" section with three entries:

- Daster Consultores**: A form with several input fields, but no specific data is visible.
- Espotel**: A form with several input fields, but no specific data is visible.
- ReciclaPapel**: A form with several input fields, but no specific data is visible.

To the right of the contracts, there is a detailed view of the "Espotel" contract document:

**FT04-V01/PRO-URH-001**

**EL PRESTADOR DE SERVICIOS** queda sometido a la Constitución de la República del Ecuador, a la Ley Orgánica del Sistema Nacional de Registro de Datos Públicos, a las Leyes y reglamentos relacionadas con la materia, principalmente, queda advertido de las sanciones penales que para estos casos establece la legislación ecuatoriana.

**CLAUSULA SEXTA. – PROPIEDAD INTELECTUAL**

Toda la información, productos y servicios generados por **EL PRESTADOR DE SERVICIOS**, relacionados con el trabajo a ejecutarse serán de propiedad de ESPOTEL S.A.

Los derechos de propiedad intelectual de la información que pertenecen a ESPOTEL no podrán ser revelados por **EL PRESTADOR DE SERVICIOS** para su reproducción parcial o total; así como su comunicación pública y distribución.

En caso de que la información resulte revelada, divulgada o utilizada por **EL PRESTADOR DE SERVICIOS** de cualquier forma distinta al objeto de este Acuerdo, ya sea de forma dolosa o por mera negligencia, será sancionado de acuerdo a las leyes vigentes para el efecto.

**EL PRESTADOR DE SERVICIOS** se obliga a entregar cualquier documentación, antecedente facilitado en cualquier tipo de soporte y, en su caso, las copias obtenidas de los mismos que constituyan información amarrada, nor el deber de

Figure 8.58: View of aspirant's contracts



Figure 8.59: View of the aspirant's signatory

## 8.5 Appendix E: Mobile Application Prototype Screenshots



Figure 8.60: View mobile application login page

**Registro**

Correo  
Ingrese correo electrónico

Número de cédula  
Ingrese número de cedula

Ingrese nombres  
Ingrese primer nombre  
Ingrese segundo nombre

Ingrese apellidos  
Ingrese primer apellido  
Ingrese segundo apellido

Contraseña  
Ingrese una contraseña

Confirmar contraseña  
Ingrese una contraseña

...  
...

Figure 8.61: View of the registration inside the mobile application

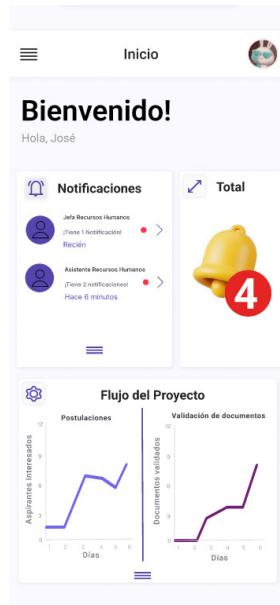


Figure 8.62: View of the dashboard of the mobile application

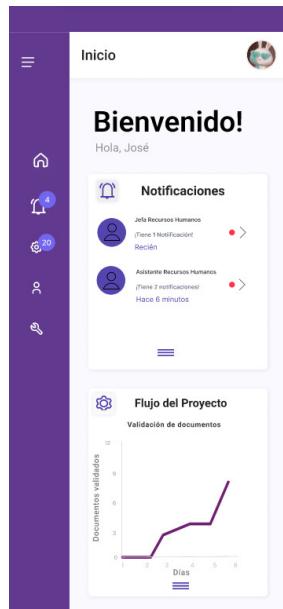


Figure 8.63: View of the mobile application sidebar



Figure 8.64: Status view of an postulation