A Human Resources business application development using .NET technologies

Subject: Information and Communication Technologies
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This paper is structured around the problematics of the human resources task of managing the job openings and unsolicited demands within the company and how .NET 4.5 framework and SharePoint 2013 platform can respond to it. All this in a cost-effective manner for the industrial partner. The developed solution is a frontend-backend closed system designed specifically for the EMS industry in Switzerland and highly customizable for each client.

Sadies, the industrial partner, had the desire to refresh the look of the current applications catalogue through the development of a human resources web application which enables HR representatives to better manage the searching and hiring process within their respective companies.

The aim of this research was to define if Microsoft technologies such as .NET 4.5 framework, SharePoint Foundation 2013 platform, MVC 4 framework can respond to the request of Sadies in rebranding their image through the development of a new human resources application. The project in his totality serves as an analysis in determining if the cost of updating the Sadies solution catalogue using the technologies previously mentioned is pertinent. And that the developed solution responds to the customer needs in a timely manner.

The backend solution has been developed using the Visual Studio Professional 2012 environment with the SharePoint Foundation 2013 as the bedrock for the entire backend HR application. The reason for this was the out-of-the-box features that SharePoint provides such as "search", "filter", the entire "list" system and CRUD operations on "List Items" that help reduce the development time. The functionalities of the application that were not native in SharePoint have been added to the solution via custom behavior implementation and features deployment.

The frontend application has been developed using the MVC 4 framework. The main reason for choosing this as a design pattern and a base framework is the possibility of having multiple frontends (multiple views) for the same business layer and model. This design pattern fits well with today's technological era, where multiple platform support is essential.

The testing stage for this solution had two main steps: internal testing and a beta version release. The internal testing was based on a "Test booklet" designed starting from the requirement definition. A beta version release has been scheduled in order to give the opportunity to the final HR user to test it in real life conditions.

The project output is:
– A SharePoint back-end application that enables the HR representative to manage the job openings, the unsolicited applications and the C.V. database
– An MVC 4 web solution, integrated to the customer website to enable future candidates to apply online
– A website that aggregates all the job openings available within the companies of SADIE›s clients.

The solution is going to be commercialized end of 2014.

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