INFOSEC Artificial Intelligence Accelerators for Haiti

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***Abstract*—When you think of Haiti you don't think of advanced technology or secure data and information. This is where we come in. It's time for a reboot. It is time for Haiti to move forward and we will start with applied science. Healthcare, education and overall living can all benefit from our research, that will be implemented in the near future. Our research explores the best factors that should be included in the software engineering and programming of systems using AI and Information Security.**

***Index Terms*—INFOSEC, HIPPA, Haiti, IoT, Identity Assurance, User Role, Java EE**

I. Introduction

It's time for a reboot. It is time for Haiti to move forward and we will start with applied science delivered by computer science that is trustworthy because of great security [1].The 2010 earthquake that affected 3 million people and killed 230K of them in Haiti brought in a rush of assistance to the country from international aid sources, but they found that they had to bring with them their own communications infrastructure, as the existing resources were damaged.

Fig. 1. Cap Haitien

Trust issues quickly became apparent, as the different governmental and non-governmental activities did not have methods in place for inter-operability of diverse systems because of needing to protect their systems with information assurance. The recovery from the disaster was slow, in part because of continuing trust issues, and in part for other reasons.

Fig. 2. Earthquake 2010

Today, ten years on, we have more effective and less expensive computer science information security hardware, software, artificial intelligence, and these technological advancements can greatly increase the trustworthiness and integrity of the communications systems of Haiti, as well as supporting resilience and recovery capabilities of the economy of Haiti to adapt to and bounce back from threats to its strength and positive growth.

The last paragraph of your Introduction section always introduces the rest of your paper: i.e., the next section is our Literature Review, followed by our Project Requirements section, followed by whatever section after that.

II. Literature Review

In our search for a publication related to our topic, we came across an article title, "Supporting Clinical Practice at the Bedside Using Wireless Technology" by Bullard, Meurer and others. In summary, they studied and tested the productivity of physicians using wireless network mobile computer verses standard desktop computer. Their results found that wireless technology allowed doctors to access information at the bedside and increased the use of clinical guidelines and decision support tools and patients accepted this use of information technology.

"Systems that are designed to simplify or automate tasks, especially using computer technologies, hold tremendous promise in guiding clinicians with patient care and increasing the safety of this care in the frenetic emergency department

(ED) setting". Developed IT systems addresses the major limitation of wireless technology portability. In addition to that, it increases security, improves performance and efficiency. Haiti does not have an officially recognized national or sector-specific cyber security strategy. We intend on changing that so that all parts of the country are safe.

III. Project Requirements

The primary goal of this project is to come up with an application design for the ER, and consultation for a new hospital. The solution's purpose is to allow these two departments to perform their duties as efficient as possible. The application needs to be either a desktop application and/or web application and use Java as the primary programming language. The propose solution needs to be simple, cost efficient, and be easy to maintain. The secondary requirement is to provide a method to install security to the site to improve security.

IV. methodology

This study's primary focus was to design and create a prototype application that will allow two units in a hospital to perform their duties as efficiently as possible. The solution should be reliable and not costly. As the hospital is under construction, some requirements are subject to change. Therefore, a dynamic design was needed to accommodate future features. Based on project requirements, Web application and Desktop Application was the two types of application that was deemed acceptable. A web application is a type of application that is deployed on a webserver. This type of application can be accessed by using a web browser. A Desktop Application is a type of application that need to be installed on every machine that will be using the application. It can only run on the platform(s) it was designed for. In general Desktop Application are harder to maintain however they provide certain security perks such as limited access to a service. To Achieve the flexibility that is required web application was chosen as the best fit for this project. The solution was divided into three modules. The first module was database design and implementation. The requirements of both departments are included in the design. The second module was to design and create a prototype application. The third module included the setup a local network, server installation. The application was created by using the Java programming language. Apache NetBeans, Eclipse, and IntelliJ were the IDE use to write the business logic of the application. MYSQL database which is supported by oracle was the database of choice due to its popularity. Th 4 GB ram variant of the Raspberry Pi 4 will be the main hardware on which the server will run. Ethernet cable connected the servers to switches and routers. To access the application, a user must be either connected via an ethernet cable or via Wi-fi. to prevent unwanted access to resources, authorized users will login using their credentials. To ensure that the site is secured the following proposition were made, the hospital need to be surrounded by fences or a wall, gates should be used at entry points, all entries need to have at least one security guard and there will be a central security office where the security cameras can be monitored.

V. preliminary findings/results.

Nothing for this section as of now

References

[1] M. B. Buntin, M. F. Burke, M. C. Hoaglin, and D. Blumenthal, "The benefits of health information technology: a review of the recent literature shows predominantly positive results," *Health affairs*, vol. 30, no. 3, pp. 464–471, 2011.