INTERNSHIP REPORT

# Development of Modules/Features for Nukeboard.co

OFFERED BY NJORKU, CAMEROON

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PERFORMED AT NJORKU, CAMEROON LTD

*A report submitted in partial fulfillment of the requirements of
Bachelor of Engineering degree programme in Computer Engineering*

Report of Internship from 1st September, 2015 to 31st January, 2016

February 16, 2016

# Declaration of Authorship

I, Alangi DERICK, declare that this report titled, "Development of Modules/Features for Nukeboard.co" and the work presented in it are my own. I confirm that:

- This work was done wholly or mainly while in candidature for a bachelors degree at this University.

- Where any part of this report has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated.

- Where I have consulted the published work of others, this is always clearly attributed.

- Where I have quoted from the work of others, the source is always given. With the exception of such quotations, this thesis is entirely my own work.

- I have acknowledged all main sources of help.

- Where the report is based on work done by myself jointly with others, I have made clear exactly what was done by others and what I have contributed myself.

Signed:

_____

Date:

_____

*"Thanks to my solid academic training, today I can write hundreds of words on virtually any topic without possessing a shared of information, which is how I got a good training and reputation in the my domain of studies and in the industrial world in and out of the country."*

Alangi DERICK

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# *Abstract*

Faculty of Engineering and Technology
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**Development of Modules/Features for Nukeboard.co**

by Alangi DERICK

Nukeboard.co is an internet recruitement based solution which enables recruiters to easily post jobs, share job offers on social media, track and manage applications(job applications) across multiple devices while maintaining and growing a CV bank. Developing modules to this software was one of the key feature to the success of this application since it brought about ease in the manageability of activities to the end users. Various modules developed are; Employer Module, Job Seeker Module, Training Module, Sponsored Jobs Module and Blog module making a total of 5 modules. This brought about a great enhancement/improvement to the software making it easy for users to use this modules/features by just activating with the click of a button in one hand and in the other hand, if the user doesn't want to use a particular feature because of one reason or the other, he/she will just deactivate the module/feature with just a click and this feature will be invisible to the entire software.

Furthermore, these modules where developed in a very modular approach in such a way that if one doesn't need a particular module which has to be removed entirely from the whole software, it will be a very easy process and this won't break other existing modules already available in the application. So this means it will be like singly removing a module and not touching the exising modules, making it easy for integration of other modules in future and making development to the software easy to understand. The above mentioned modules will be explained in detail in the body of this report. . .

# *Acknowledgements*

I would like to express my deepest appreciation to all those who provided me the possibility to complete this report. A special gratitude I give to internship project manager, Mr. William Mukete, whose contributions in stimulating suggestions and encouragement, helped me to coordinate my project especially in writing this report.

Furthermore I would also like to acknowledge with much appreciation the crucial role of the staff of Faculty of Engineering and Technology, who gave the permission to use all required equipment and the necessary materials to complete the task "Development of Modules/Features for Nukeboard.co". A special thanks goes to my team mate, Fonji Fonkeng Rocard, with whom i worked in collaboration with on the project "Nukeboard". To continue, special thanks to all my friends and mostly my mentor from childhood Mr. Nkwa Walters Chuo who really helped me into the amazing world of IT. Last but not least, many thanks go to the head of the project, Mr. Churchill Mambe Nanje, who has invested his full effort in guiding the team in achieving the goal for this project. I have to appreciate the guidance given by other supervisor as well as the panels especially in our project presentation that has improved our presentation skills thanks to their comment and advices....

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# List of Abbreviations

| | |
|---|---|
| **CSS** | Cascading Style Sheet |
| **DNS** | Domain Name System |
| **FTP** | File Transfer Protocol |
| **HTML** | Hyper Text Markup Language |
| **HTTP** | Hyper Text Transfer Protocol |
| **JS** | JavaScript |
| **JSON** | JavaScript Object Notation |
| **LaTeX** | Lamport TeX |
| **MVC** | Model View Controller |
| **ORM** | Object Relational Model |
| **OS** | Operating System |
| **PHP** | Hypertext Preprocessor |
| **QA** | Quality Assurance |
| **SaaS** | Software as a Service |
| **SQL** | Structured Qquery Language |
| **SMTP** | Simple Mail Transfer Protocol |

*Dedicated to my mum, Mrs. Alangi Anastasia Wi and my brothers and also to the Nkem Ngu's Family....*

# Chapter 1

# Introduction

## 1.1 What is Njorku?

Njorku is a technology based platform for career and recruitment services in Africa. It has product called Njorku which is an emerging job search engine for Africa, with thousands of unique visitors per month and growing steadily month-on-month. Njorku is localized in 9 African countries and counting.



FIGURE 1.1: The company's logo

## 1.2 History of Njorku

Njorku was launched in March, 2011 and has given job seekers free and unlimited access to hundreds of thousands of jobs from company websites and job boards across Africa. Njorku was founded by Mambe Churchill Nanje and has a very strong team of professionals around the world and has raised seed funding from a Canada-based technology company and a business angel in France. Njorku has offices in Buea, SWR Cameroon.

### 1.2.1 Njorku Ltd products

Njorku Ltd has 2 main products in the market running live and helping the community in various ways, the products are listed below as follows; Njorku Search Engine and Nukeboard.co

### 1.2.2   Njorku Search Engine(njorku.com)

Njorku is a job search engine where you can find thousands of jobs from all over Africa.

### 1.2.3   Nukeboard(nukeboard.co)

Nukeboard.co is an internet recruitement based solution which enables recruiters to easily post jobs, share job offers on social media, track and manage applications(job applications) across multiple devices while maintaining and growing a CV bank

## 1.3   What I did during the Internship period

### 1.3.1   Studied the Software's(nukeboard.co) codebase

Before coding on the software, I had to learn the coding style of the application, understand the work flow of the software in order to know what nukeboard.co actually does.  This took me 2 days since the software was not very complex and I had all the skills necessary to start working on the platform.  After these 2 days of extreme study, I immediately started writing codes for the software.

### 1.3.2   Work I did on Nukeboard during internship

During a period of 5 months internship at Njorku Ltd Buea, I was assigned the following task to work on which i did successfully and was evaluated on. The tasks are listed as follows:
    - Developed Features(Modules) on Nukeboard.
    - Did Quality Assurance(QA) on the software.

## 1.4   Why did I do the following task mentioned above?

### 1.4.1   Why Feature Development?

I developed modules for nukeboard because the software was targetting users who are not very experienced with Computing and we had to build modules for the software to make the work or tasks very easy for the users to accomplish and also to make usability of the software easy to the end users.  Modules were also build to make sure that more features where added to the software based on the users demands from the market.

### 1.4.2   Why Quality Assurance(QA)?

Quality Assurance was done to ensure that the software is properly build and we meet the purpose of the software. I carried out the task so that the team of programmers working on the software can know which part of the software needs improvement and changes. After this task was complete, I had done 53 test cases and details about this will be available below.

    As mentioned above, I shall explain in detail all what I carried during my intership period and research done, other activities out of internship site and other projects done which where in one way or the other related

to the internship. All these shall be explain in the body of this internship report.

# Chapter 2

# Literature Review

## 2.1   Concepts and Technologies used by Nukeboard

Nukeboard.co is a software that was build with a combination of many different technologies, these technologies span across web technologies, database programming and administration, server configuration and linux administration, MVC programming paradigm and Object oriented programming. I had the some skills already before working on the project and needed to do some background research on technologies I new nothing about before fully contributing to the project and doing my own internship task. The project was build using Object oriented PHP and MVC programming paradigm. Nukeboard run on the Laravel 4.2 framework which is a PHP web framework written on other framework.

Its a highly documented framework and its documentation can be found here: https://laravel.com/docs/4.2, the latest version of Laravel is 5.2. I needed to learn from the documentation anything i don't know how to use concerning the framework, in order to accomplish my intership project. In addition, I also did a background research on other technologies used in the project and I found out that Apache Tika which is an application used for Parsing PDF documents to extract the text from the PDF file and it uses Java to do its processing and the documentation can be found here: https://tika.apache.org/0.5/documentation.html, these parsing was done so that we can have a dump CV text so we can search for keywords concerning applicants for jobs in any job on nukeboard.co.

Sub-domains where highly used in nukeboard.co and it was a concept I did not really learn in school so had to do some research to understand how its implemented on servers using virtual machines and Laravel. Documenations I used to read about sub-domains can be found [x] and [x] and all these links and references will also be added to in the Reference section of these report.

A list of techonologies and tools used to accomplish the whole project are; PHP, HTML, CSS, CDN, Apache Tika, Laravel 4.2, MVC, jQuery, JavaScript, MySQL, phpMyAdmin, DNS Masq, SQL, Git and Github. All these technologies was used for the success of these product and to be able to work on the project, I had to learn all these various technologies in order to stand a chance.

## 2.2   Similarities with other system that exist

There exist other systems that perform a similar goal like nukeboard.co like; https://www.jobboard.io which was built mostly to suite the needs of US and other non-African countries. The merit of http://www.nukeboard.co is mostly suiting the needs of the African citizens and is built to solve the local problems of job offers in our country, this is a big difference with this sytem and other system which exist performing the same goal.

Another advantage that nukeboard.co has is that if there is a problem, there is a possibility to even meet in person with the nukeboard or an assistant if your problem can't be solved remotely but for other system that exists, it will be costly travelling out of the country if need be. In addition to the above mentioned, the services of nukeboard.co is cheaper than that of other system that exist like https://www.jobboard.io. In terms of pricing, Basic plan for Job Board software is: 149 dollars / month while for Nukeboard, a basic plan is free.

Furthermore, there is also a disadvantage about nukeboard, its build using PHP which is a technology that does not support multi threading which mean if there is more than 1 million users on the site performing operations at the same time, the through put of the application will be very high making response time to be very high to and inconviniencing the users. But Job Board was built with Multithreaded technologies that will improve on throughput and response time making the site faster to user and operations quicker.

# Chapter 3

# Improvements on the Existing System

## 3.1 Developing Modules for Nukeboard