



**SCHOOL OF COMPUTING AND INFORMATION TECHNOLOGY**

**DEPARTMENT OF COMPUTER SCIENCE**

**ATTACHMENT REPORT**

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**Course of study : BACHELORS IN SOFTWARE ENGINEERING**

**Name : JOB MWATU MAKWANI**

**Registration Number : SC212/1454/2019**

**Host Institution for the Attachment : THE COUNTY COMMISSIONER OF MAKUENI**

**Period for the Attachment : 3 MONTHS**

**Attachment Supervisor : DR. Njenga**

## **DECLARATION**

I, Job Mwatu Makwani, hereby declare that this training report is my original work and has not been submitted before for any academic award either in this or other institutions of higher learning for academic publication or any other purpose. The references used here from other materials are indicated in the references section.

**Job Mwatu Makwani**

**Reg. No. SC212/1454/2019**

Sign: \_\_\_\_\_ Date: \_\_\_\_\_

This report was approved and officiated by the School/University-based supervisor,

**NAME:**

**Lecturer, Murang'a University of Technology**

Sign: \_\_\_\_\_ Date: \_\_\_\_\_

## **DEDICATION**

I would like to dedicate this paper & everything I did to my lovely friends, brother, friends & to all who contributed be it financially, emotionally & physically towards my success whole I continued to stride forward with education up to this point. Their support is highly appreciated. I would like to give my special dedication to my lovely Dad and Mum.

## **ACKNOWLEDGEMENT**

First of all, I would like to thank my God, for helping me starting from the beginning to the end of my attachment period.

I extend my supreme gratitude to Murang'a University of Technology for providing such kind of opportunity for students to broaden their perception of what the real world in the field of technology looks like. Its effort is also to make sure that the whole internship program achieves its desired goals.

I would also like to express my special thanks to Alex Muse, director of ICT Authority giving me a chance to spend my practice in the company and helping me in my day-to-day activities during the internship time.

I extend my thanks to the team for being wonderful teammates, mentors, and a great support network. Each one of them had a part in helping me gain confidence as a professional.

Finally, I would like to express my special thanks to my family and friends for helping me in all aspects and appreciate my spending my all-time in the workplace

## **EXECUTIVE SUMMARY**

I spent the last three months (May - August) working in the Information communication and Technology Authority (ICTA) Department. There are three chapters in this report: The first chapter of this report describes the organization's history in order to provide the reader with a comprehensive picture of the organization's structure as well as its progress to date. The organization's mission, vision, and basic values are also outlined in the first chapter of this report. In chapter one, the organizational structure as well as the tasks of employees in the organization were thoroughly explored. In chapter two of this report, I have expounded over the many departments that make up the company. I've also discussed the major functions of each department to help the reader understand the staff's responsibilities. Along with the routines I was assigned in the county assembly, I also discussed the major purpose for the attachment exercise. In the first chapter of this report, I have documented the comprehensive evaluation of the attachment phase by describing; success or failures throughout the attachment period, obstacles I encountered during the attachment period, and how I solved the challenges.



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## CHAPTER 1: INTRODUCTION

### 1.1 GEOGRAPHICAL LOCATION

Wote Town (Makueni County Headquarters), County Commissioners Building

### 1.2. HISTORY OF THE ORGANIZATION.

The County Assembly of Makueni's ICT department is an agile tech department that offers simple customized and viable products and services implemented with our unique state-of-the-art cloud technology and compelling experience that will give our clients the maximum possible satisfaction.

In terms of quality, they provide the unrivaled quality that you and your organization may seek. Our computerized administrations are handled with the most recent and advanced world class technologies.

They take pride in providing exceptional administrations as well as staff who understand how to achieve extraordinary results with extraordinary consistency.

### 1.3 Vision

- To be an excellent agency in provision and promotion of a secure, cohesive and crime free society for Kenyans prosperity.

### 1.4 Mission

- To promote the provision of security and safety, maintain a comprehensive national population database, enhance nationhood, facilitate administration of justice, provide correctional services and coordinate national government function for social- economic and political development in Kenya.

### 1.5 Core values

- **Integrity:** We deliver what we promise by subscribing to the highest levels of efficiency, effectiveness, transparency and accountability.
- **Creativity:** We provide solutions in innovative, imaginative and inspiring ways.
- **Teamwork:** We work together as a team to meet our common goals, while appreciating each other's talents.



- **Allegiance:** We promote patriotism and protection of the environment while giving the best value for money invested in us.

## 1.6 ORGANISATIONAL STRUCTURE

The ICT Authority is headed by an Executive Director, who oversees the running of five departments.

### 1.Department of Standards

Through the Department of Standards, we set and enforce ICT standards and guidelines for human resource, infrastructure, processes & systems across the Public Service.

### 2.Department of Innovation

The Department of Innovation undertakes the following: Introducing viable ICT Innovations to Government for adoption; Receiving innovations and products/solutions from all over Kenya; Evaluating to qualify their viability and potential to scale; Facilitating technical assistance, linkage to markets and marketing expertise as well

### 3.Department of ICT Capacity

The ICT Capacity Department facilitates ICT literacy for the citizens

### 4.Project Management Office

The Project Management Office is in charge of the day-to-day implementation of ICT Programs/ Projects that the Authority is implementing on behalf of the Government of Kenya

### 5.The ICT Infrastructure Department

Key Functions for the Infrastructure department are Network Connectivity and Cloud/Data center

## 1.7DETAILS OF THE PLACEMENT DEPARTMENT

The organization does not advertise attachee positions but relies on internal recommendations. I, therefore, forwarded my resume and attachment recommendation letter Human Resource office. After one successful interview, I was offered a chance.

The Director of ICT authority was interested to understand my career goals since I was the only one among my team was doing a bachelor's degree my fellow team mates where perusing diploma. I became the fifth member of the group.

## CHAPTER 2: ATTACHMENT EXPERIENCES

### 2.1 General Activities Undertaken

General activities I carried out include;

- Trouble shooting network in different departments.
- Attend weekly ICTA meetings
- Present tasks you have been doing since the last meeting.
- Help teammates with their research.
- Schedule meetings when necessary
- Technical writing and also reading materials from other members to upskill.
- Managing Agile controller software\
- Provided support to other departments

### 2.2 Specific activities undertaken

Specific activities I carried out include;

1. Ensure protection of networks, web sites, applications, databases, servers and data centers, and other technologies
2. Data analysis of the AGILE controller users.
3. Helped team in maintenance of equipments.
4. Help in doing tests for fiber cable installation.
5. Research on load balancing.
6. Rehabilitation of dilapidated fiber cables,
7. Prepare documentation for my projects.

### 2.3 An analysis of learned knowledge and applied skills

The knowledge and skills acquired during my attachment form the bedrock of my future career development. The strategies learned in Network trouble shooting, Data Analysis, and Software Engineering will go a long way and undertaking that I may find myself into. Therefore, I am confident in applying the knowledge learned in any company that may allow me to offer my services in my career. Developed great thinking on startup ideas and real-time solutions.

My skills before as stated in the resume I submitted on the application;

- ❖ Programming Languages
  - SQL,
- ❖ Libraries, frameworks, and tools.
  - MySQL

## ❖ Network trouble shooting

Through the help of my supervisors who felt the need to push me to my full potential, I was able to apply these and up my skills. [2]

Learned knowledge:

As a junior quant I have developed;

1. Strong abilities in mathematics and statistics
2. Solid skills network maintenance and trouble shooting
3. Extensive Network trouble shooting
4. Learnt more on the OSI model

### 2.4 A profile of skills and competencies gained

- 1) Technical skills in Data Science
  - (1) software Quality Assurance and Testing
  - (2) Network trouble shooting
  - (3) Network IP configuration
  - (4) Social skills
  - (5) Mathematics and Statistics
- 2) Non-Technical Skills in Data Science
  - (a) A Strong Business Acumen- Through the analytics sessions, being able to explore and help an organization to explore new business opportunities.
  - (b) Strong Communication Skills - successfully communicate findings with team members who don't have the same professional background.
  - (c) Great Data Intuition- know when to look beyond the surface for insightful information.
- 3) The ability to thrive in a fast-paced, dynamic environment and not be overwhelmed

### 2.5 Observations and critique

#### a) Great teamwork spirit.

Since the first day I joined the firm, I enjoyed good teamwork among the staff and other attaches that helped me to adapt in quickly in the firm and learn a lot as well as share easily what I knew to other staff and attaches.

#### b) Suitable Learning environment

The manager and other staff were very willing to teach me on the new things that I needed to know in the firm and this helped me to learn a lot within the three months' period. Where

things went a bit wrong, I could be corrected with the spirit of “mistakes are part of learning” to keep me encouraged to achieve perfection.

c) Sense of belonging

“Our organization” I have used such phrase severally because of the sense of belonging and trust given to me by the organization. Better Work-Life Balance- Flexibility of schedules.

## **CHAPTER 3:**

### **SUMMARY**

The attachment experience has successfully introduced me to the industry. I realized that I needed to develop confidence as a professional. I have mentors with who I will surely keep in touch and hope to stay connected professionally.

Some of the knowledge learned I'll showcase as I do my final project.

In conclusion, I believe I learned a lot from my supervisors and about quantitative analysis. Back to the drawing book to cement and up my skills.

## CONCLUSION

Working in a fintech company like ICT Authority was one of my dreams when I was looking for an attachment opportunity. I was excited before and am even more excited, and convinced I'd like to work in such environments. For young blood like me working with creative minds and professionals was a great experience for me. The office and people there were great like home. We used to have fun, and work lately with high encouragement. Every communication counts.

I will take the lessons and skills I learned and apply them to my next position.

## RECOMMENDATIONS

### *To the Organization*

More opportunities for students to do attachment in their organization.

### *To the university*

Constant supervision of students, The intern recommends the university carry out constant supervision and monitoring of students during the internship training to encourage them to perform their duties fully and also accurately. This will also put a close link between the academic supervisors and the field supervisors to foster appropriate assessment of what the attaches are doing in the field.

Secure Attachment placements for students. The University should help students to secure positions according to their respective programs undertaken at the University by giving students recommendations to ease their training periods and also avoid the ache gotten by students in search of attachment placements.

Should continue with the attachment program, this is because it helps to prepare the students for their careers in the future and also enable the students to practice the theoretical knowledge obtained during class to be exercised practically. It also helps to develop students' understanding of work ethics, employment demands, responsibilities, and opportunities