UNIVERSITY OF NAIROBI
COLLEGE OF BIOLOGICAL AND PHYSICAL SCIENCES
SCHOOL OF COMPUTING AND INFORMATICS

INDUSTRIAL ATTACHMENT BRIEFS

Name of Student: Osoro Stephine Ratemo

Registration No: P15/36777/2013

Institution Attached: Digital Matatus/MIT

Period of Attachment: Feb – May 2016

Objective

1. Exposure to industrial work environments
2. Active participation in creating practical solutions using knowledge learnt
3. Build professional networks with potential employers

Activities Undertaken

1. Research

In digital matatus, I did a lot of research on Nairobi's transit system and other crowd sourcing projects in the world. Some of the research readings included reading articles and published Papers on previous crowd sourcing research that had been done in various parts of the world.

I also wrote some reaction papers based on this research.

Other research that I did in Digital Matatus was identifying previous transport projects that had been done before in the context of Nairobi and other parts of the world, researching on how to crowd source transit data using GTFS, Ushahidi platform, Conveyal and amazon web services.

2. Interviewing Key stakeholders

2.1   IBM Research

I, together with the MIT students went to IBM research to talk with them concerning the Matatu project that they had previously done. This was to help us learn from them the successes and failure they faced in their transit project they did. They had done a project to crowd source information of quality of roads using an android app that uses gyroscope to determine the quality of road one is passing in. (I was to work with the MIT masters students in crowd sourcing information about Matatus and how to solve matatu problems using these information)

2.2   Direct Line Insurance

I went to direct line insurance with the MIT students to discuss with direct line insurance their role in matatu industry, I learnt a lot on how insurances interact with matatus and the problems they faced.

2.3   NTSA

We also went to NTSA to discuss with its manager concerning their experience with monitoring and managing the Matatu sector in Kenya. I learnt a lot of problems that NTSA are facing that computer science students in my school could help solve.

3. Implementing SemaMa3 app

After doing the research and interviewing key stakeholders, I had enough information to create the matatu app. I made SemaMa3 android app that crowd sources information concerning safety inside matatus. Basically it was an app that users could outpour their heart with regards to safety in Matatus. Also the users in the app could rate matatu Sacco based on various safety issues.

4. Beta Testing

After creating the app, I did beta testing with my fellow classmates and other students and users to test the app. This was to get the users feedback concerning the app and if users felt the app would be used in Nairobi's context. I really got a lot of information from the user. I also learnt beta testing is a very important step in any software project.

After the Beta testing, I reiterated the app following the beta tester recommendations hence thereby refining the app to the final product.

5. Trip to MIT

This was one of the highlights of my internship. I visited various place in MIT and Harvard University where got a chance to visit various labs in them. I learnt of various projects that these technology labs were doing. Some of the labs and places I visited are as follows:

1. MIT Civic Design and Data Lab
2. MIT Media Lab
3. MIT Senseable Lab
4. MIT Responsive environment
5. MIT Center for Civic Media
6. MIT Changing Places
7. Harvard University

Lessons worth Sharing

One of the biggest lessons worth sharing is one should take a keen approach while approaching a software project. Research and understanding the end users and the context in which the software should be used should be given a higher priority than the implementation step of the project. This is just in line as what I had been taught in class. This will lead to success of the project.

I also learnt how to network and build connections with any company officials that you get into contact with. A career tutor in US taught me that I should always make good connections and create a good impression since there is only one chance for a first impression.

In MIT I learnt for every theory class they have, there is a complementary session for their workshop where they exercise it with aid of their Lecturer. They practice everything they learn and this makes their theory more practical and this improves their skills.