**SUMMER INTERNSHIP PROJECT**

**WEEKLY DIARY**

**PROJECT 1**

**ANALYSIS OF THE REQUIREMENTS OF PERVACIO CUSTOMERS AND FINDING KEY PERFORMANCE INDICATORS**

**PROJECT 2**

**RETAIL AI PLATFORM – BUSINESS ANALYTICAL MODEL FOR DOCOMO (IDENTIFYING THE DATA SOURCES AND POSSIBLE MINING AND ANALYTICS)**

**Submitted By**

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**Internship Company : Pervacio Inc**

**Location : Hyderabad**

**Total internship period : 8 Weeks (April 2, 2018 – May 25, 2018)**

**ABOUT PERVACIO INC**

Pervacio is a mobile automation company that has products for Diagnostics, Trade-in, Data Switch and Data Wipe that can be used to assess the quality of second-hand mobile devices. They have a large customer base from Warehouses and Original Equipment Manufacturers (OEM’s). Started in 2004, they are now spread across 6 continents. They are now the leaders in Mobile Device Automation Solutions. They help customers in reducing the cost of operations and also improve their visibility and quality.

**PROJECTS ASSIGNED**

**Project 1**

**Topic:** Analysis of the requirements of Pervacio customers and finding Key Performance Indicators

**Duration:** 5 weeks (Week 1 to Week 5)

**Project 2**

**Topic:** Retail AI Platform - Business Analytical model for DOCOMO (Identifying the data sources and possible mining and analytics).

**Duration:** 3 weeks (Week 6 to Week 8)

**DESCRIPTION**

**Project 1: Analysis of the requirements of Pervacio customers and finding Key Performance Indicators**

**Week 1 (April 2, 2018 – April 6, 2018)**

* The first day of internship had induction process. It started with filling out documents that captured all necessary information.
* It was then followed by a session that ran through information about organization’s hierarchy, culture and their success path and growth since inception.
* The second day of internship had technical session wherein overall idea of what organization is doing was explained by Vice president. It was then followed by CEO’s session with information on how the company has expanded across the universe. This process continued until the end of Day 2.
* After this, information on each and every product of the company was given by technical team and demo sessions were arranged wherein hands-on idea of the products was explained.
* Followed by this, a meeting was scheduled with Vice president and CEO of India wherein we were discussed about the projects available.
* I was assigned a project initially on finding out the requirements of possible Pervacio customers and Key Performance Indicators that can be used to track Company’s success and that can also be pitched in for customer acquisition.
* Critical problems faced by possible customers were found out. After that, the root cause of the problem was explored and an analysis was done as to what Pervacio can contribute to the resolution of the problem. Findings and analysis were based on the secondary research data.
* The company had clients from e-commerce sites, OEM’s (Original Equipment Manufacturers) and Warehouses but many areas were unexplored by them.
* I made a detailed analysis of the areas where the company has got a huge scope for expansion and finally came up with three areas.
* The areas chosen to explore were Recommerce websites or Refurbishers, IT enterprises, and Retailers.
* Recommerce websites or Refurbishers, IT enterprises deals with B2B and Retailers deal with B2C.

**Week 2 (April 9, 2018 – April 13, 2018)**

* I divided my assignment into three parts. As the first part of my assignment, I started to explore IT enterprises.
* There was much scope in the area of IT **asset disposition (ITAD).**
* ITAD market’s future growth and CAGR rate were studied to support the reasons for choosing this sector.
* Strict regulations by the government were forcing all enterprises to have a proper channel for ITAD for managing the IT assets in an efficient manner.
* Enterprises use a high volume of the mobile devices which they provide to their employees for work-related activities. Even though some enterprises are encouraging "Bring Your Own Device (BYOD)" programs, there are many companies that provide their own mobile phones to their employees considering data security.
* The possibility of having critical client data on these mobile devices is very high. Once these mobile phones are designated for retirement, there is a need for proper IT asset disposition (ITAD) which is a serious concern for these enterprises.
* There is a huge possibility of data theft because of improper wiping that leads to a huge cost of data theft.
* A few enterprises destroy these devices ending up in e-waste.
* Some enterprises prefer not to refurbish because of data theft risk and keep the devices with themselves increasing inventory and ending up in huge e-waste.
* Hence, Pervacio’s “DATA WIPE” product had huge scope in this area.
* Data diagnostics too has a scope in this sector to some extent.
* Hence, 2 Key Performance indicators were found out and suggested. They can be used to track business growth and can also be pitched in for customer acquisition.
* Assessment methods for the suggested Key Performance Indicators were found out.

**Week 3 (April 16, 2018 – April 20, 2018)**

* I started to explore Refurbishers or Recommerce companies from week 3.
* The used smartphone market was studied and their growth rate was analyzed too.
* One of the main risks in this sector is the **Technology obsolescence.**
* Shorter product life cycle pose a serious threat to this sector since they have to equip themselves with the rapidly growing technologies.
* People often replace their smartphone with new ones to keep themselves updated with the technology.
* This had significantly increased the number of mobile devices in reverse supply chain.
* Recommerce companies or refurbishers are finding a huge demand for them.
* The main issue faced by them is the inventory cost.
* Most of them undergo step by step manual process for diagnosis which is time-consuming and resulting in most of the incoming mobiles finding space in inventory.
* Value of these secondary market devices gets depreciated every day and hence they need a faster method to process and reduce the number of devices in the inventory.
* Pervacio Data Diagnostics and Trade-in were found to have huge scope in this sector.

**Week 4 (April 23, 2018 – April 27, 2018)**

* 3 key performance indicators were suggested for Recommerce sector to track performance and to be used for customer acquisition.
* Assessment methods for the suggested Key Performance Indicators were found out.
* As the last part of the project, Retailer segment was explored.
* The retail industry is very critical in the sense that it directly deals with the end consumer. More than anything, the way customers are being handled plays an important role in gaining customer loyalty.
* Our metrics should be measuring the customer satisfaction score to find out if we are moving on the right track.
* Pervacio Diagnostics, Trade-in, and Wipe had a huge scope in this sector.
* Hence, 2 Key Performance indicators were found out and suggested that can be used to track business growth and can also be pitched in for customer acquisition.
* Assessment methods for the suggested Key Performance Indicators were found out.

**Week 5 (April 30, 2018 – May 4, 2018)**

* For all the listed down Key performance indicators, I was informed to find out different ways of how they can be measured.
* This was required since organization wanted to track every parameter in a single dashboard.
* Hence, for all the key performance indicators across all sectors, I started to explore the measurement criteria.
* It was all done through secondary research.
* 6 out of 7 key performance indicators had traditional ways of measuring them.
* For IT enterprises, One KPI had an assessment package that is being used universally.
* This particular package needed a lot of customization according to the requirements of the company.
* Hence, this assessment package was thoroughly studied and possible customizations are suggested.
* Also, final output analysis was also explored.
* Hence, Project 1 was successfully completed at the end of week 5. On the whole, Key Performance indicators for each of the 3 sectors (IT enterprises, Recommerce websites or Refurbishers and Retailers) were suggested and corresponding measurement methods were also explored.
* Mid-review happened in Week 5 and panel was happy with the work.

**Project 2: Retail AI Platform - Business Analytical model for DOCOMO (Identifying the data sources and possible mining and analytics)”**

**Week 6 (May 7, 2018 – May 11, 2018)**

* A meeting was scheduled with the Vice president of the company where I was asked to work on production data dump of DOCOMO.
* I had to design a Business Analytical Model for DOCOMO with the available set of data.
* Data dump basically had Mobile make, Mobile model, Type of Test, Test name, total devices scanned and total issues found.
* The initial set of data was a dump from past 2 years and hence it needed a lot of cleansing.
* Help from Data Analysis team was requested and after approval, I had a series of meetings with the Data Analyst team.
* Description of each of the tests was understood.
* Data cleansing was done wherein unwanted and inappropriate set of data were found out and scrapped from the actual data dump.
* Final dataset was made ready for analysis.

**Week 7** **(May 14, 2018 – May 18, 2018)**

* The Organization was using QlikView for analysis and visualization. I was requested to use the same. Since I had prior knowledge of Tableau, I got permission to proceed with Tableau.
* There was 10 OEM’s in the data dump that was provided.
* Each of these OEM’s had their own set of Make and Model with different types of issues encountered.
* The requirement was to find out two things. First one is to find the most failed test for each make and model.
* Hence, data were accordingly divided for different OEM’s and saved in different sheets.
* With the help of tableau, two graphs were made for this requirement.
* Box plot and actual data in a table were made using Tableau that clearly depicted the requirement.
* With the help of the graph, Organization was able to find out the most failed test for each and every model for all the OEM’s provided.
* The second requirement was to find out the most failed make and model for each of the tests that were provided.

**Week 8 (May 21, 2018 – May 25, 2018)**

* The same procedure was followed as the first requirement and Line plot and Data table was made.
* This was done for all the OEM’s.
* With the help of the graph, Organization was able to find out the most failed test for each and every model for all the OEM’s provided.
* The organization requested to send all the final reports and hence final report was made for both of the projects and shared with the mentor.
* I had one on one meeting with mentor regarding the final report.
* Meaningful insights are found out which was then given to Data Analyst team for further analysis.
* Last day of the internship had the closing procedures.