**Data Technology Plan**

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**Assignment Introduction:**

The purpose of a **Data Technology Plan** is to match the business needs of the organization with the correct technological solution so that beneficial business value can be provided to the organization. From the data Collection Plan, the **Technical Criteria** and **Business Criteria** will be established. Based upon this criterion, the best technology to use will be selected.

This assignment will create a Data Technology Plan that addresses both the **Technical and Business Criteria** of the Organization. This can be done by dividing the Data Technology Plan into three different stages: **Storage, Pre-Processing, and Visualization**. The **Technology Solution** will then be recommended.

The Data Technology Plan will be presented in a table format. Each column will answer the following questions about the **Key Technical Criteria, Key Business Requirement, and** **Technology Solution**. There may be more than criteria and solution for each phase.

**Key Technical Criteria:** What Storage solution is required? Is there some unique pre-processing that needs to be done? Will the final results be displayed in a dashboard? Use the work you have from the previous two assignments to guide the technical requirements. Try to be as specific as possible.

**Key Business Requirement:** Are there any business constraints that will guide your technology choices? What are these constraints? Use the suggestions in the lesson to guide your thinking and feel free to make up others! Again, try and be as specific as possible.

**Technology Solution:** Choose a technology that will fit both the technical and business criteria. Provide a rationale as to why you picked this technology.

**Keywords:** Data Technology Plan, Technical Criteria, Business Criteria, Storage, Pre-processing, Visualisation, Technology Solution

**Overview of Business Problem:**

Tangerine Bank has a growing customer base. It offers services such as savings accounts, chequing accounts, credit card services, mutual funds and mortgages. Majority of the customers at the bank are liability customers with deposits of varying sizes.

**Problem Definition:** The **number of customers who are borrowers (asset-based customers) is small**, and the bank is **interested in expanding** **its asset-based customers** to bring in **more loan business, and in the process, earn more revenue for the bank through interest on loans.**

**Business Objective:** **Service quality** is the top reason customers switch banks. Banks have a lot of customer data, but effective and personalized service is lacking because there is a lack of big data analysis to **learn about customers and their expectations**. Tangerine Bank needs **to employ data analysts** and professionals in the marketing and finance field to **gain insights** from the large amount of data the bank collects. Tangerine Bank plans to **achieve greater customer loyalty** through **personalized offers.** The bank will **utilize the power of big data** to get an understanding of each customer. Through analytics process, Tangerine Bank **will reduce business risk by using predictive analytics and saving costs**.

**Data Sources and Tools used for Tangerine Bank’s Data Technology Plan:**

The data that is required for the collection plan will be gathered from internal and external data sources. The data sources for this project include **the bank’s internal data, social media blogs and company website, and customer service department voice and transcript records.**

The data must be classified into **private data sources** and **public data sources** in order to make informed decisions around the business problem.

**Internal Data (Private Data Sources)**

* Customer details data
* Customer Satisfaction Surveys
* Customer financial records
* Customer Service phone call transcripts
* Marketing Campaign number of contacts with customer, duration of last contact, outcome, and days passed since last contact.
* The **unstructured data** that is generated through customer phone transcripts can be used to detect the concerns of the customers, and what sentiments are the most common about issues faced with the bank.

**External Data (Public Data Sources)**

* Article/Blog Engagement from Bank Website, and online bank related blogs such as Tangerine Bank blog, Reddit, Quora, etc. can be used to learn about the feedback, comments, bank- related topics of interest, and customer satisfaction in different areas of service the bank office.

**Tools used for Tangerine Bank Data Technology Plan**

* SQL database
* NOSQL database
* MongoDB
* Python
* R
* Tableau

**Data Technology Plan**

**Data Technology Plan** is defined as the strategic plan that allows a company to know how a business organization uses various technology tools for making their storage, pre-processing and visualisations decisions. The **Data Collection Plan** will be translated into **Technical Criteria** and **Business Criteria** to select the best technology. The **Data Technology Plan** will be organized in Table Format as shown below. **Please see Data Technology Plan separated by Core Banking System Data, Marketing Division Records, and Unstructured Data in Attached Excel File.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Phase** | **Key Technical Criteria** | **Key Business Criteria** | **Technology Solution** |
| Storage |  |  |  |
| Pre-Processing |  |  |  |
| Visualization |  |  |  |

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