Software Requirements Specification

for

Employee Efficiency Evaluation System

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Introduction

1.   Purpose

        To analyze and maintain the record of employee's efficiency for easier profiling of the employee and measuring his growth rate.

        Employees in IT companies often tend to take work less seriously and work without much consequences of their leisurely behavior. Some even push work until the deadline even though the work can be completed in less time . This can be avoided by maintaining a complete employment record which should be produced before joining a new workplace.

        By looking at the complete employment history and the scores of the candidate, the recruiter can get a rough estimate of the employee's efficiency, his strengths and weaknesses as assessed by his previous employers.

2.   Scope

        This tool can widely be used by the HR team of every company to assess and manage the employee details and their performance.
This software manages the performance of the employee and the scope is as similar as the human resource.Since the fundamental aim of this software is to ensure good amount of work from every department in the organization/company.This particular system monitors everything people do at workplace from the vision/goals of the company to its employee and their personal interests,their intent, how well they have executed a particular task assigned to them against the company standards.It basically considers overall performance ,defines its goals,and helps to design a working strategy which can be implemented periodically and further can be used to analyze and inturn used to make better decisions for the growth of the company. And finally can be used to validate the employees selection process , identify their needs and rewards or benefits can be awarded accordingly.

3.   Definition, acronyms and abbreviations

4.   *HR - Human Resource*
5.   *IT - Information Technology BLE*
        - Bluetooth Low Energy
6.   *NLP - Natural Language Processing DBMS -*
        Database Management Systems

7. References

Performance Management

https://www.shrm.org/hr-today/trends-and-forecasting/special-reports-and- expert-views/documents/performance-management.pdf

Performance Management System: A Strategic Tool for Human Resource Management

https://www.researchgate.net/publication/305720304_Performance_Mana gement_System_A_Strategic_Tool_for_Human_Resource_Management

Performance Management

http://sjput.in/pdf/hrmiii_pm.pdf

8. Overview

We will be calculating the efficiency of workers based on the activities and work they'll be doing at the workplace based on number of breaks taken , checking browsing history , work completed , problem solving ability , client management , communication , meeting the requirements , development quality etc.

The entire score of the employee is maintained using blockchain technology so that it can be displayed and can be considered by the next employer or internal team management, promotions and work assignment.

Overall Description

1. Product Perspective

The product will help in tracking the employee's dedication towards work and maintaining all the previous reviews by the HR team. This will help to track the growth and development of the employee and reward him based on the same.

The blockchain technology ensures integrity of the data and it cannot be manipulated by anyone hence it can be used by the human resource team while recruiting a new employee and understand his strengths and weaknesses as per the review of the previous employer.

This immensely helps the smart and dedicated employees to stand out among all the other employees and get better raises and promotions.

2. Product Functions

Some of the products features are :-

1. *Indoor positioning system*
   -Constantly tracking position of the employee inside the office

   -Using BLE Beacons for tracking
   -Calculating effective working hours
2. *NLP based search history tracking*
   -Analyzing browser search history to monitor Employee efficiency
3. *System active hour calculation*
   -Calculating work timeline and active hour for efficiency mapping
4. *Normalizing score for different organization*
5. *Maintains blockchain based performance history for every employee.*
6. *This system gives automated prompts and reminders so the tasks will be completed on time.*

We Analyze the performance by the following metrics :-

1. ***Quantitative Metrics****: The simple way to measure since measuring quantity is easier than quality. We track the number of productive hours or time period for which he/she took a break from work or maybe the number of sales/ referrals .*
2. ***Qualitative metrics:*** *This can be measured by feedback given by the HR or the manager and further weights can be assigned and get a score.*
3. ***Efficiency metrics:*** *This basically considers both quantity and quality of the work.*

3. User Characteristics

This will be very beneficial for companies who want to monitor or check how efficient their workers are doing .
This will help the HR team during new recruitments as they get a brief idea about previous employment of the candidate from an authentic source. It helps the dedicated employees to stand out in their team and get a proper validation for their work.

4. Constraints

One of the major constraints is for the companies to adopt this system since this can be a bit harsh on employees.
Normalizing scores for different companies to give and store a generalized score.

Taking manual scoring into consideration along with automated scoring.

5. Assumptions And Dependencies

Assumption is that the HR team is giving unbiased and accurate data about the employees or workers' various activities and performance.

Assuming that the bluetooth broadcasting is allowed inside the workplace for BLE beacon based indoor positioning

Specific Requirements

1. External Interface

Consists of User Interface requirements , Hardware and Software Interface requirements.

User interface is where the user can interact with the software to update the score of each employee and find the final score and comparison between present and previous scores.

Hardware interface includes bluetooth based indoor positioning system and software interface includes DBMS, browsing history tracking etc.

2. Functional Requirements

The functional requirements include the BLE beacons, esp32 based bluetooth based tracking, local database for data collection, server for efficiency calculation, and blockchain technology for maintaining a decentralized certificate.

3. Non Functional Requirements

Non-functional requirements include, permission to analyze the browsing history, permission to track the movement of the employee inside the building and acceptance of the new scoring system.

4. Design Constraints

The limitation includes inability to automate every aspect of the efficiency matrix. Normalization of the score for each company may not be accurate.