**JOB STRESS PREDICTION**

**Abstract**

Nowadays, job stress is very common and it has a high cost in terms of workers’ health, absenteeism and lower performance. Although stress is not a disease, it is the first sign of a bigger problem which can generate long-term damages. This paper presents a predictive model of job stress which was obtained from data collected by telephone mobile and sensors. Relevant attributes were identified through a correlation analysis. Learning algorithms were applied in order to determine the predictive model. We use the classifier algorithms ZeroR, Naive Bayes, Simple Logistics, Support Vector Machine, kNearest-Neighbor, AdaBoost and Random Tree. The proposed model obtained an accuracy of 0.947, a coverage of 0.941 and an F-measure of 0.939. This model was implemented in a mobile application called “TestStress”. Also, the results obtained of the experimentation with the app are presented. We intended to do this project in a company .We use this project to analyze the stress of employees in a company. All those processes going on in a company are included in this project like manager can register employees with their details and manager can assign several task to the employees, so employee can view their given tasks and update their status to the manager, also employees can mark their attendance and complaints against the company and view corresponding reply uploaded by the manager. For the functions of the technical part we collect the data about the employees and prepare their dataset .Along with this parameters inputed by the manager are also taken then machine learning is applied for the prediction of employees job stress.

**Existing System**

The existing job stress prediction system employs a data-driven approach to assess and predict stress levels among employees within an organization. It utilizes a combination of physiological, behavioral, and self-reported data to create a comprehensive analysis of an individual's stress factors. The system integrates wearable devices, surveys, and performance metrics to continuously monitor and collect relevant data.

Machine learning algorithms analyze this data to identify patterns and correlations associated with stress. Factors such as workload, deadlines, interpersonal relationships, and environmental conditions are considered in the prediction model. The system provides real-time feedback to both employees and management, alerting them to potential stress triggers and suggesting interventions to mitigate stressors.

Regular updates and refinements to the model ensure its accuracy and relevance over time. The system aims to enhance employee well-being, productivity, and job satisfaction by proactively addressing stress-related issues. Privacy measures are in place to protect sensitive information, and the system operates within ethical guidelines to maintain a healthy work environment. Ongoing research and feedback loops contribute to the continuous improvement of the job stress prediction system.

**Proposed System**

The proposed system for "Job Stress Prediction" aims to enhance employee well-being and productivity by leveraging advanced data analytics and machine learning techniques. The system will integrate data from various sources, including employee surveys, performance metrics, and physiological indicators, to develop a comprehensive understanding of individual and collective stress levels within the organization.Using predictive modeling, the system will identify patterns and correlations between different factors and stress outcomes. It will consider variables such as workload, deadlines, interpersonal relationships, and external events. Real-time monitoring of physiological data, such as heart rate and sleep patterns, will provide additional insights into employees' stress levels.

The system will generate personalized stress risk assessments for employees, offering proactive recommendations for stress management based on individual needs. Moreover, it will provide organizational-level insights to help management identify and address systemic issues contributing to job stress.

**Modules**

* Admin
* Login
* Manage employee
* Add work
* View assigned work
* View complaint
* Post reply
* Manage counsellor
* View stress
* Employee
* Register
* Login
* View assigned work
* Upload work
* Add complaints
* View replies
* View notification
* HR
* Register
* Login
* View employee
* View work
* Assign work to employee
* View uploaded work
* View complaint
* View reply
* Counsellor
* Register
* Login
* View employees and their stress
* Send consultation notification

**HARDWARE AND SOFTWARE REQUIREMENT SPECIFICATION**

Hardware Specification

The selection of hardware is very important in the existence and proper working of any of the software. When selecting hardware, the size and capacity requirements are also important. The hardware must suit all application developments

. • Processor : i3 or above.

• System Bus : 32Bit or 64Bit

• RAM : 4 GB or Above

• HDD : 500 GB or Above

• Monitor : 14” LCD or Above

• Key Board : 108 Keys

• Mouse : Any Type of mouse

• Mobile : Android supported mobile phone

Software specification

One of the most difficult tasks is selecting software, once the system requirement is find out then we have to determine whether a particular software package fits for those system requirements. This section summarizes the application requirement.

• Operating System : Windows 10 Any 32 bit or 64 bit platform 8

• Front End : Html, Css

• Back End : MySQL Sever ,Python

• IDE : Eclipse or Android studio : Python 3.6 or above

: PyCharm