UNDERSTANDING EMPLOYEE MOOD AND STRESS USING AI

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Abstract— **Employee workplace stress has become a real challenge for the organisations. The lack of parity in between work and life has been a real point of thought for the organisations. Many ways including mental wellbeing programs, surveys, research programs, policies have been taken as well as a lot of research is ongoing to reduce the workplace stress and improve the quality of employee satisfaction. Some of which has been really succeeded but the main challenge is to monitor the amount of stress one is undergoing throughout the day identifying his/her daily movements. Apart from that real measurement is also needed about the actual amount of stress one is having vs the amount of stress expressed by the person. One of the best ways to identify this with automation or AI is identifying the day-to-day postures, body language, voice modulation along with surveys and taking input from employees about their moods and thoughts. The comprehensive study will help in providing real-time measurements based on data collection.**

Keywords— **AI, Mood, Stress, Employee Satisfaction, HR Development**

I.   INTRODUCTION:

This AI based model to detect employee stress and mood will identify the Whole process in two parts. Firstly, the daily body language, voice modulation monitoring will provide a consolidated report about employee mood and stress. On the other hand, the employee survey will generate a report based on input from them. Now the comparison between the two will provide a much clearer picture about the employee mood and stress that they are undergoing.

II.   PROCESS:

PART 1: Body Language and Voice Processing:
A. **Sample Collection:** The body language, facial expression, sitting postures as well as the voice pitches will be taken as samples for data analysis. The daily movement of the employee can be monitored through pictures collected along with the tone and pitches used in meetings or any other places. The whole process will be anonymous and will be done at any random time.

B. **Sample processing:** The system will be trained to be fully supervised by providing a lot of processed sample data. The system will then process the whole data and provide a vivid detail in the form of a report about employee stress and moods daily.

C. **Report generation:** A consolidated report will be generated by the system daily and the same will be stored within the database. This will complete the first phase of the process.

PART 2: Employee Feedback and opinion
A. **Employee survey:** A weekly survey will be conducted from employees to identify the workload, work-life balance, daily work press, stress level and the amount of loads they are having within the week. This survey can be conducted using a questionnaire in written form or automated voice questioning system where employees will be asked certain questions at any time of the week and their responses will be noted and processed.

B. **Analysis and Report generation:** The data taken from the employees through surveys will be processed and analysed. Post analysis is done a report will be generated and will indicate the amount of stress and mood felt by the employee throughout the week

PART 3: Comparison and final Analysis:
A .**Data Analysis and Report:** This is the most important and critical part of the process. A study will be done between the two processed data, and a final report will be generated based on them. Post report generation the same will be shared with the employee as well as with the HR department and the supervisor.
Another report will be shared with the HR Department, which will be a consolidated report and can be downloaded manager-wise or role-wise or HRBP wise.

PART 4: Application to track this report:
An application web server/mobile application will be developed which will help in collecting the data from the

employee as well as the reports will be visible in the application and can be downloaded from the same.

III. COLLECTION OF DATA:

The data will be collected through cameras presence in 3-4 places which include cafeteria, entrance/exit, corridor etc. The data will be collected at different time frames

IV. BENEFITS.

A. Employee stress monitored and same available to both employees and organizations.
B. A comprehensive study to reduce errors while data collection
C. Al generated and analyzed reports, so manual efforts reduced
D. Al will collect the raw sample which will be more prominent while generating report
E. Voice modulation survey will help in capturing a better version of sample and a large amount of sample size can be analyzed.

V. CHALLENGES:

A. The biggest challenge will be sample collection, especially the survey which can be monotonous after some time.
B. The sample must be pure i.e. any duplicated or manipulated result will lead to effect in report generation
C. The system needs to be trained properly else there will be mismatches between the inputs captured and report generated I
D. The survey must be completely anonymous else employee will lag in participating in it.
E. Using mask can provide challenge in sample collection

VI. CONCLUSION:

A new way to understand and identify stress is being proposed. It will have several challenges, especially in implementing the design as everything will be Al generated but at the same time, it will be much more effective and error free and will provide efficient reports.

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