Stress Detection Project using Machine Learning

Name: Karan Das

Guide: Talent Battel

Literature Servey:

Sr. No	Title Of Paper	Name Of Authors	Publish Year	Remarks	Understanding
1	Stress Detection with Machine Learning and Deep Learning using Multimodal Physiological Data. **(IEEE Xplore Part Number: CFP20N67-ART; ISBN: 978-1-7281-5374-2)**	**Pramod Bobade Vani M.**	**September 06,2020**	**Algorithm:** KNN algorithm, Random Forest and SVM Algorithm, Decision Tree **Analysis:** Artificial Neural Network (ANN) **Clustering:** Principal Component Analysis(PCA)	Here, we focus mainly on a person's emotional condition for detecting stress. And make two state: 1)Three class classification: Amusement vs baseline vs stress, 2) stress vs non-stress(amusement and baseline). Compare the states and classifier, we get result of 80.34% on the three-class and 93.12% on the binary classification tasks. Further work may be carried out by taking self-declarations from the data set topics, which were acquired use multiple organized surveys.
2	A Decision Tree Optimised SVM Model for Stress Detection using Biosignals	**Alana Paul Cruz, Aravind Pradeep, Kavali Riya**	**July 28 - 30, 2020**	**Algorithm:** SVM Algorithm, Decision Tree.	Here we study Stress or distress occurs when one faces the mental distorted by external or internal factors. Stress has an effect Person mentally, physically,socially

				Dataset: Physionet's drivedb database. **Preprocessing:** Baseline Correction, Wavelet Decomposition. **Target:** show better accuracy in detecting stress	and in many ways. To get over the stress of the person must visit the doctor and he can help the person after the seeing the sample dataset model. **Performance:** Tree Optimised SVM is giving more accuracy then the Cubic SVM with Gaussian. So we can say that This model will be able to do better detection of stress.
	Sivasankar and Krishnaveni K.S				
3	Automatic Stress Detection Using Wearable Sensors and Machine Learning: A Review.	Shruti Gedam and Sanchita Paul	July 1-3,2020	**Algorithm:** Support Vector Machines (SVM), Logistic regression, KNN, Decision tree, Random forest and naïve Bayes. .	This paper aims to provide a comprehensive review on various stress detection technique (physiological measures like heart rate, heart rate variability and skin conductance) and gives a reliable guideline towards more efficient detection of stress. **According to American Psychological Association (APA),** there are mainly three types -acute stress, episodic acute stress and chronic stress. Here we measure various stress related factors, like physical measures, physiological signals, answering questionnaire, mathematical test, videos, microblog and other techniques, etc. For those various stress related factor we used diff types of ml to get accurate result.
4	Machine Learning and IoT for Prediction and Detection of Stress	Mr.Purnendu and Shekhar Pandey		**Algorithm** : SVM Algorithm. Logistic regression, VF – 15, Bayesian classification	We can integrate this work with any health monitoring device and safety device. To get better results, we are using his heart rate and also his daily activity pattern to check that what time of the day he is exercising

			algorithm	and what time he is stressed or not.
			To measure: IOT and Audroino. **Target:** We can use a person's heart beat to predict whether that person is fit, unfit and over trained or not, provided we have that person's age. Based on heart beat we can predict whether a person is in Stress or not.	
5	Stress detection using deep neural networks	**Russell Li and Zhandong Liu**	**August 9-10, 2020**	**Algorihm**: Decision tree, SVM, KNN, Random forest, linear discriminant analysis (LDA).	
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