Abstract

Classifications of mental illness such as schizophrenia are very broad; therefore, the proposed approach attains at practical and task-relevant diagnostic categories by use of clustering techniques. A Self-Organizing Feature Map (SOFM) approach was design and implemented for classifying transcribed speech samples and determines mental disorders. An unsupervised Artificial Neural Network was implemented using the NeuroSolution. The proposed classification system is used to determine whether a text or speech sample is generated by a person has mental illness or not. The proposed approach shows clearly that all the categories are identified and classified appropriately, with the proposed SOFM achieving a high accuracy of (97) in the classification phase for predicting the desired output.

References


- Hadzic, M., Chen, M., & Dillon , T. (2008) . Towards the mental health ontology , proceeding of the IEEE International Conf. on Bioinformatics and Biomedicine, USA. DOI: 10.1109/BIBM.2008.59
- C. R. S. Lopes & et. al. T. B. Ludermir1, M. C. P. de Souto1 e A. B. Ludermir , &quot;Neural Networks for the analysis of Common Mental Disorders Factors&quot; Proceeding SBRN &apos;02 Proceedings of the VII Brazilian Symposium on Neural Networks (SBRN&apos;02), IEEE Computer Society Washington, DC, USA ©2002 , ISBN:0-7695-1709-9


**Index Terms**

- Computer Science
- Artificial Intelligence

**Keywords**

- Mental Illness
- Self-organizing Map
- Text Clustering
- Text Classification
- Unsupervised Learning