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Research Article

Abstract Computation in Schizophrenia Detection through Artificial Neural Network Based Systems

L. Cardoso,[1] F. Marins,[1] R. Magalhães,[2,3] N. Marins,[4] T. Oliveira,[1] H. Vicente,[5] A. Abelha,[1] J. Machado,[1] and J. Neves[1]

[1] *University of Minho, CCTC, 4710-057 Braga, Portugal*
[2] *Life and Health Sciences Research Institute (ICVS), School of Health Sciences, University of Minho, 4710-057 Braga, Portugal*
[3] *ICVS/3B's, PT Government Associate Laboratory, Guimarães, 4710-057 Braga, Portugal*
[4] *Centro Hospitalar Conde de Ferreira, 4200-227 Porto, Portugal*
[5] *Department of Chemistry and Évora Chemistry Centre, School of Science and Technology, University of Évora, 7004-516 Évora, Portugal*

Correspondence should be addressed to J. Neves; jneves@di.uminho.pt

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Schizophrenia stands for a long-lasting state of mental uncertainty that may bring to an end the relation among behavior, thought, and emotion; that is, it may lead to unreliable perception, not suitable actions and feelings, and a sense of mental fragmentation. Indeed, its diagnosis is done over a large period of time; continuos signs of the disturbance persist for at least 6 (six) months. Once detected, the psychiatrist diagnosis is made through the clinical interview and a series of psychic tests, addressed mainly to avoid the diagnosis of other mental states or diseases. Undeniably, the main problem with identifying schizophrenia is the difficulty to distinguish its symptoms from those associated to different untidiness or roles. Therefore, this work will focus on the development of a diagnostic support system, in terms of its knowledge representation and reasoning procedures, based on a blended of Logic Programming and Artificial Neural Networks approaches to computing, taking advantage of a novel approach to knowledge representation and reasoning, which aims to solve the problems associated in the handling (i.e., to stand for and reason) of defective information.