



Intelligent Models to Predict the Prognosis of Premature Neonates According to Their EEG Signals

Submitted by Pierre Chauvet on Fri, 06/15/2018 - 09:50

Titre	Intelligent Models to Predict the Prognosis of Premature Neonates According to Their EEG Signals
Type de publication	Article de revue
Auteur	Alhajjar, Yasser [1], Al Hajjar, Abd El Salam Ahmad [2], Daya, Bassam [3], Chauvet, Pierre [4]
Editeur	IGI Global
Type	Article scientifique dans une revue à comité de lecture
Année	2017
Langue	Anglais
Date	2017
Numéro	1
Pagination	57-66
Volume	6
Titre de la revue	International Journal of Biomedical and Clinical Engineering
ISSN	2161-1610
Résumé en anglais	<p>The aim of this paper is to find the best intelligent model that allows predicting the future of premature newborns according to their electroencephalogram (EEG). EEG is a signal that measures the electrical activity of the brain. In this paper, the authors used a dataset of 397 EEG records detected at birth of premature newborns and their classification by doctors two years later: normal, sick or risky. They executed machine learning on this dataset using several intelligent models such as multiple linear regression, linear discriminant analysis, artificial neural network and decision tree. They used 14 parameters concerning characteristics extracted from EEG records that affect the prognosis of the newborn. Then, they presented a complete comparative study between these models in order to find who gives best results. Finally, they found that decision tree gave best result with performance of 100% for sick records, 76.9% for risky and 69.1% for normal ones.</p>
URL de la notice	http://okina.univ-angers.fr/publications/ua17062 [5]
DOI	10.4018/IJBCE.2017010105 [6]
Lien vers le document	https://www.igi-global.com/gateway/article/185624 [7]

Liens

[1] <http://okina.univ-angers.fr/yalhajjar/publications>

[2] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=28383>

[3] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=2091>

[4] <http://okina.univ-angers.fr/pierre.chauvet/publications>

- [5] <http://okina.univ-angers.fr/publications/ua17062>
- [6] <http://dx.doi.org/10.4018/IJBCE.2017010105>
- [7] <https://www.igi-global.com/gateway/article/185624>

Publié sur *Okina* (<http://okina.univ-angers.fr>)