



Document details - Classification of Dengue Gene Expression Using Entropy-Based Feature Selection and Pruning on Neural Network

1 of 1

Export Download More... >

Advances in Intelligent Systems and Computing
Volume 736, 2018, Pages 519-529
17th International Conference on Intelligent Systems Design and Applications, ISDA 2017; Delhi; India; 14 December 2017 through 16 December 2017; Code 212209

Classification of Dengue Gene Expression Using Entropy-Based Feature Selection and Pruning on Neural Network(Conference Paper)

Pandiyarajan, P., Thangairulappan, K.

^aDepartment of Computer Science, Ayya Nadar Janaki Ammal College, Sivakasi, Tamilnadu 626124, India

^bResearch Centre in Computer Science, V.H.N.Senthikumara Nadar College, Virudhunagar, Tamilnadu 626001, India

Abstract

Dengue virus is a growing problem in tropical countries. It serves diseases, especially in children. Different diagnosing methods like ELISA, Platelia, haemocytometer, RT-PCR, decision tree algorithms and Support Vector Machine algorithms are used to diagnose the dengue infection using the detection of antibodies IgG and IgM but the recognition of IgM is not possible between thirty to ninety days of dengue virus infection. These methods could not find the correct result and needs a volume of the blood. It is not possible, especially in the children. To overcome these problems, this paper proposes classification method of dengue infection based on informative and most significant genes in the gene expression of dengue patients. The proposed method needs only gene expression for a patient which is easily obtained from skin, hair and so on. The classification accuracy has been evaluated on various benchmark algorithms. It has been observed that the increase in classification accuracy for the proposed method is highly significant for dengue gene expression datasets when compared with benchmark algorithms and the standard results. © 2018, Springer International Publishing AG, part of Springer Nature.

Author keywords

Classification Dengue diagnosis Dengue infection Feature selection Neural network Pruning

Indexed keywords

Engineering controlled terms:

Chemical detection Classification (of information) Computer aided diagnosis Data mining
 Decision trees Feature extraction Intelligent systems Neural networks Systems analysis
 Viruses

Engineering uncontrolled terms

Classification accuracy Classification methods Decision-tree algorithm Dengue infection
 Gene expression datasets Pruning Support vector machine algorithm Tropical countries

Engineering main heading:

Gene expression

Cited by 4 documents

Khan, N. , Nwafor Okoli, C. , Ekpin, V.
 Adoption and utilization of medical decision support systems in the diagnosis of febrile Diseases: A systematic literature review

(2023) *Expert Systems with Applications*

Buathong, W. , Jarupunphol, P.
 Dengue fever prediction modelling using data mining techniques

(2021) *International Journal of Data Mining and Bioinformatics*

Pandiyarajan, P. , Thangairulappan, K.
 Classification of dengue serotypes using gini-index based feature selection and rule extraction from neural network

(2019) *Journal of Advanced Research in Dynamical and Control Systems*

View details of all 4 citations

Inform me when this document is cited in Scopus:

Set citation alert > Set citation feed >

Related documents

Find more related documents in Scopus based on:

Authors > Keywords >

SciVal Topic Prominence ⓘ

Topic:

Prominence percentile:



ISSN: 21945357
 ISBN: 978-331976347-7
 Source Type: Book Series
 Original language: English

DOI: 10.1007/978-3-319-76348-4_50
 Document Type: Conference Paper
 Volume Editors: Abraham A., Gandhi N., Muhuri P.K., Muda A.K.
 Sponsors:
 Publisher: Springer Verlag

