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Proceedings - 5th International Conference on Computer and Communication Engineering: Emerging Technologies via Comp-Unication Convergence, ICCCE 2014
4 February 2015, Article number 7031651, Pages 258-261
5th International Conference on Computer and Communication Engineering, ICCCE 2014; Sunway Putra HotelKuala Lumpur; Malaysia; 23 September 2014 through 24 September 2014; Category numberE5413; Code 110844

Identification of vessel anomaly behavior using support vector machines and bayesian networks (Conference Paper)

Handayani, D.O.D.[a], Sediono, W.[b], Shah, A.[a]

[a]Department of Computer Science, Information and Communication Technology, International Islamic University of Malaysia, Gombak, Selangor Darul Ehsan, Malaysia
[b]Department of Mechatronics Engineering, International Islamic University of Malaysia, Gombak, Selangor Darul Ehsan, Malaysia

Abstract

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In this work, a model based on Support Vector Machines (SVMs) classification to identify vessel anomaly behavior has been proposed and implemented. The results are compared to Bayesian Networks (BNs). The real world Automated Identification System (AIS) vessel reporting data is used in this work. The results shows that SVMs can achieve higher accuracy compared to BNs in both memory-test and blind-test. The effect of holdout method which are partitioned size of training and testing data set on the accuracy result are also investigated in this study. The proposed classifier demonstrates to be a viable tool for identifying the vessel anomaly behavior by its accuracy. © 2014 IEEE.

Author keywords

Anomaly Behaviour BNs Holdout Maritime Surveillance SVMs

Indexed keywords

Engineering controlled terms: Statistical tests Support vector machines

Anomaly Behaviour
BNs Holdout
Maritime surveillance
SVMs

Engineering main heading: Bayesian networks

ISBN: 978-147997635-5
Source Type: Conference Proceeding
Original language: English

DOI: 10.1109/ICCCE.2014.80
Document Type: Conference Paper
Volume Editors: Gunawan T.S.
Sponsors: Felda Wellness Corporation,Malaysia Convention and Exhibition Bureau (MyCEB),Malaysian Industry-Government Group for High

Technology,University Putra Malaysia,Yayasan Kesejanteran Bandar
Publisher: Institute of Electrical and Electronics Engineers Inc.

(2009) 2009 12th International Conference on Information Fusion, FUSION 2009

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