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An ensemble CRT, RVFLN, SVM method for estimating propane spot price

(Conference Paper)

 Chiroma, H.^{a,d} [✉](#), Abdul-kareem, S.^a [✉](#), Gital, A.Y.^b [✉](#), Muaz, S.A.^a [✉](#), Abubakar, A.I.^c [✉](#), Mungad^a [✉](#), Herawan, T.^a [✉](#) [👤](#)
^aUniversity of Malaya, Pantai Valley, Kuala Lumpur, Malaysia^bDepartment of Computer Science, Universiti Teknologi Malaysia, Kampus UTM Skudai, Johor Bahru, Malaysia^cDepartment of Information Science, International Islamic University, Kuala Lumpur, Malaysia[View additional affiliations](#) [v](#)

Abstract

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In this paper, we propose an ensemble of the CRT-RVFLN-SVM (Classification and Regression Tree (CRT), Random Variable Functional Link Neural Network (RVFLN), and Support Vector Machine (SVM)) to improve robustness and effectiveness in estimating propane spot price. The propane spot price data which are collected from the Energy Information Administration of the US Department of Energy and Barchart were used to build an ensemble CRT-RVFLN-SVM model for the estimating of propane spot price. For the purpose of evaluation, the constituted intelligent computing technologies of the proposed ensemble methodology in addition to Multilayer Back-Propagation Neural Network (MBPNN) were also applied to estimate the propane spot price. Experimental results show that the proposed ensemble CRT-RVFLNSVM model has improved the performance of CRT, RVFLN, SVM, and MBPNN. The can help to reduce the level of future uncertainty of the propane spot price. Propane investors can use our model as an alternative investment tool for generating more revenue because accurate estimations of future propane price implies generating more profits. © Springer International Publishing Switzerland 2015.

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- 1 (2004) *Annual Energy Outlook 2004 with Projections to 2025*. Cited 84 times.
<http://www.eia.doe.gov/oiaf/archive/aeo04/index.html>

- 2 Agrawal, P.C., Ramsey, B.D.
Use of propane as a quench gas in argon-filled proportional counters and comparison with other quench gases

(1988) *Nuclear Inst. and Methods in Physics Research, A*, 273 (1), pp. 331-337. Cited 17 times.
doi: 10.1016/0168-9002(88)90833-9

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- 3 Kline, D.L., Müller, G.C., Hogsette, J.A.
Evaluation of propane combustion traps for the collection of *Phlebotomus papatasi* (Scopoli) in southern Israel

(2011) *Journal of Vector Ecology*, 36 (SUPPL.1), pp. S166-S171.
doi: 10.1111/j.1948-7134.2011.00127.x

View at Publisher

- 4 Malliaris, M.E., Malliaris, S.G.
Forecasting inter-related energy product prices

(2008) *European Journal of Finance*, 14 (6), pp. 453-468. Cited 15 times.
doi: 10.1080/13518470701705793

View at Publisher

-
- 5 Pao, Y.-H., Phillips, S.M., Sobajic, D.J.
Neural-net computing and the intelligent control of systems

(1992) *International Journal of Control*, 56 (2), pp. 263-289. Cited 124 times.
doi: 10.1080/00207179208934315

View at Publisher
-
- 6 Hassim, Y.M.M., Ghazali, R.
A modified artificial bee colony optimization for Functional Link Neural Network training

(2014) *Lecture Notes in Electrical Engineering*, 285 LNEE, pp. 69-78. Cited 4 times.
<http://www.springer.com/series/7818>
ISBN: 978-981458517-0
doi: 10.1007/978-981-4585-18-7_8

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-
- 7 Sexton, R.S., Gupta, J.N.D.
Comparative evaluation of genetic algorithm and backpropagation for training neural networks

(2000) *Information sciences*, 129 (1-4), pp. 45-59. Cited 81 times.
doi: 10.1016/S0020-0255(00)00068-2

View at Publisher
-
- 8 Cortes, C., Vapnik, V.
Support-Vector Networks

(1995) *Machine Learning*, 20 (3), pp. 273-297. Cited 15218 times.
doi: 10.1023/A:1022627411411

View at Publisher
-
- 9 Garg, M., Singh, U.
C & R Tree based Air Target Classification Using Kinematics
(2012) *Int. J. Commun. Comp. Tech*, 3 (1), pp. 15-21.
-
- 10 Hornik, K., Stinchcombe, M., White, H.
Multilayer feedforward networks are universal approximators

(1989) *Neural Networks*, 2 (5), pp. 359-366. Cited 7760 times.
doi: 10.1016/0893-6080(89)90020-8

View at Publisher
-
- 11 Hornik, K.
Approximation capabilities of multilayer feedforward networks


(1991) *Neural Networks*, 4 (2), pp. 251-257. Cited 1296 times.
doi: 10.1016/0893-6080(91)90009-T

View at Publisher
-
- 12 Tipping, M.E.
Sparse Bayesian Learning and the Relevance Vector Machine

(2001) *Journal of Machine Learning Research*, 1 (3), pp. 211-244. Cited 3064 times.
doi: 10.1162/15324430152748236

View at Publisher
-

- 13 Richard, B.A.
(2008) *statistical learning from a regression perspective. Springer Series in Statistics*. Cited 4 times.
Springer, New York
-
- 14 Jammazi, R., Aloui, C.
Crude oil price forecasting: Experimental evidence from wavelet decomposition and neural network modeling
(2012) *Energy Economics*, 34 (3), pp. 828-841. Cited 71 times.
doi: 10.1016/j.eneco.2011.07.018
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-
- 15 Ekonomou, L.
Greek long-term energy consumption prediction using artificial neural networks
(2010) *Energy*, 35 (2), pp. 512-517. Cited 142 times.
www.elsevier.com/inca/publications/store/4/8/3/
doi: 10.1016/j.energy.2009.10.018
[View at Publisher](#)
-
- 16 Chiroma, H., Abdulkareem, S., Abubakar, A., Usman, M.J.
Computational intelligence techniques with application to crude oil price projection: A literature survey from 2001-2012
(2013) *Neural Network World*, 23 (6), pp. 523-551. Cited 16 times.
[View at Publisher](#)
-
- 17 Abubakar, A., Chiroma, H., Zeki, A., Uddin, M.
Utilising key climate element variability for the prediction of future climate change using a support vector machine Model
(2014) *International Journal of Global Warming*
(in Press)

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