

# Contents

## Deep Learning and Real-Time Classification

Evaluation of Randomized Variable Translation Wavelet Neural Networks . . .	3
<i>Khairul Anam and Adel Al-Jumaily</i>	
Road Lane Segmentation Using Deconvolutional Neural Network . . . . .	13
<i>Dwi Prasetyo Adi Nugroho and Mardhani Riasetiawan</i>	
Rare Event Prediction Using Similarity Majority	
Under-Sampling Technique . . . . .	23
<i>Jinyan Li, Simon Fong, Shimin Hu, Victor W. Chu, Raymond K. Wong, Sabah Mohammed, and Nilanjan Dey</i>	

## Image Feature Classification and Extraction

Pattern Recognition of Balinese Carving Motif Using Learning	
Vector Quantization (LVQ) . . . . .	43
<i>I Made Avendias Mahawan and Agus Harjoko</i>	
Feature Extraction for Image Content Retrieval in Thai Traditional Painting	
with SIFT Algorithms . . . . .	56
<i>Sathit Prasomphan</i>	
Modeling of the Gaussian-Based Component Analysis on the Kernel Space	
to Extract Face Image . . . . .	68
<i>Arif Muntasa and Indah Agustien Siradjuddin</i>	
Classification of Batik Kain Besurek Image Using Speed Up Robust	
Features (SURF) and Gray Level Co-occurrence Matrix (GLCM) . . . . .	81
<i>Fathin Ulfah Karimah and Agus Harjoko</i>	

## Applications of Machine Learning

Model Selection in Feedforward Neural Networks for Forecasting Inflow	
and Outflow in Indonesia . . . . .	95
<i>Suhartono, Prilyandari Dina Saputri, Farah Fajrina Amalia, Dedy Dwi Prastyo, and Brodjol Sutijo Suprih Ulama</i>	
The Selection Feature for Batik Motif Classification	
with Information Gain Value . . . . .	106
<i>Anita Ahmad Kasim, Retantyo Wardoyo, and Agus Harjoko</i>	

Eye Detection for Drowsy Driver Using Artificial Neural Network . . . . .	116
<i>Mohd. Razif Bin Shamsuddin, Nur Nadhirah Binti Shamsul Sahar, and Mohammad Hafidz Bin Rahmat</i>	
Time Series Machine Learning: Implementing ARIMA and Hybrid ARIMA-ANN for Electricity Forecasting Modeling . . . . .	126
<i>Wahyu Wibowo, Sarirazty Dwijantari, and Alia Hartati</i>	
A Design of a Reminiscence System for Tacit Knowledge Recall and Transfer . . . . .	140
<i>Sabiroh Md Sabri, Haryani Haron, and Nursuriati Jamil</i>	
Pattern Search Based on Particle Swarm Optimization Technique for Block Matching Motion Estimation Algorithm . . . . .	151
<i>Siti Eshah Che Osman and Hamidah Jantan</i>	
Enhancing Parallel Self-organizing Map on Heterogeneous System Architecture . . . . .	162
<i>Muhammad Firdaus Mustapha, Noor Elaiza Abd Khalid, Azlan Ismail, and Mazani Manaf</i>	
<b>Data Visualization</b>	
Geovisualization Using Hexagonal Tessellation for Spatiotemporal Earthquake Data Analysis in Indonesia . . . . .	177
<i>Ridho Dwi Dharmawan, Suharyadi, and Nur Muhammad Farda</i>	
Incremental Filtering Visualization of JobStreet Malaysia ICT Jobs . . . . .	188
<i>M. Bakri, Siti Z. Z. Abidin, and Amal Shargabi</i>	
Software Application for Analyzing Photovoltaic Module Panel Temperature in Relation to Climate Factors . . . . .	197
<i>Zainura Idrus, N. A. S. Abdullah, H. Zainuddin, and A. D. M. Ja'afar</i>	
Budget Visual: Malaysia Budget Visualization . . . . .	209
<i>Nur Atiqah Sia Abdullah, Nur Wahidah Ab Wahid, and Zainura Idrus</i>	
<b>Fuzzy Logic</b>	
Fuzzy Arithmetical Modeling of Pressurizer in a Nuclear Power Plant . . . . .	221
<i>Wan Munirah Wan Mohamad, Tahir Ahmad, Niki Anis Ab Rahman, and Azmirul Ashaari</i>	
Nitrogen Fertilizer Recommender for Paddy Fields . . . . .	230
<i>Mohamad Soffi Abd Razak, Shuzlina Abdul-Rahman, Sofianita Mutalib, and Zalilah Abd Aziz</i>	

Ranking Performance of Modified Fuzzy TOPSIS Variants Based on Different Similarity Measures . . . . .	241
<i>Izyana Athirah Selem, Rosma Mohd Dom, and Ainon Mardhiyah Shahidin</i>	

### **Prediction Models and E-Learning**

Prediction of New Bioactive Molecules of Chemical Compound Using Boosting Ensemble Methods . . . . .	255
<i>Haslinda Hashim and Faisal Saeed</i>	
Pragmatic Miner to Risk Analysis for Intrusion Detection (PMRA-ID). . . . .	263
<i>Samaher Al-Janabi</i>	
Intelligent System E-Learning Modeling According to Learning Styles and Level of Ability of Students . . . . .	278
<i>Utomo Budiyo, Sri Hartati, S. N. Azhari, and Djemari Mardapi</i>	

### **Text and Sentiment Analytics**

Mining Textual Terms for Stock Market Prediction Analysis Using Financial News . . . . .	293
<i>Asyraf Safwan Ab. Rahman, Shuzlina Abdul-Rahman, and Sofianita Mutalib</i>	
Content Quality of Latent Dirichlet Allocation Summaries Constituted Using Unique Significant Words . . . . .	306
<i>Muthukkaruppan Annamalai and Amrah Mohd Narawi</i>	

<b>Author Index . . . . .</b>	<b>317</b>
-------------------------------	------------

Soft Computing in Data Science

Third International Conference, SCDS 2017, Yogyakarta,  
Indonesia, November 27–28, 2017, Proceedings

Mohamed, A.; Berry, M.W.; Yap, B.W. (Eds.)

2017, XV, 317 p. 123 illus., Softcover

ISBN: 978-981-10-7241-3