

Contents

Part I From Machine Learning to Data Mining	
Analyzing Accident Prone Regions by Clustering	3
Shuvashish Paul, Ashik Mostafa Alvi, Mahmudul Alam Nirjhor, Shohanur Rahman, Adeeba Kashfee Orcho and Rashedur M. Rahman	
Analyzing Life Insurance Data with Different Classification Techniques for Customers’ Behavior Analysis	15
Md. Saidur Rahman, Kazi Zawad Arefin, Saqif Masud, Shahida Sultana and Rashedur M. Rahman	
Classification of Product Rating Using Data Mining Techniques	27
Pinku Deb Nath, Sowvik Kanti Das, Fabiha Nazmi Islam, Kifayat Tahmid, Raufir Ahmed Shanto and Rashedur M. Rahman	
MASS: A Semi-supervised Multi-label Classification Algorithm with Specific Features	37
Thi-Ngan Pham, Van-Quang Nguyen, Duc-Trong Dinh, Tri-Thanh Nguyen and Quang-Thuy Ha	
Parallel Self-organizing Map Using Shared Virtual Memory Buffers	49
Noor Elaiza Bt Abd Khalid, Muhammad Firdaus B. Mustapha, Azlan B. Ismail and Mazani B. Manaf	
Parametric Optimization of the Selected Classifiers in Binary Classification	59
Daniel Kostrzewa and Robert Brzeski	
Prediction of Academic Performance During Adolescence Based on Socioeconomic, Psychological and Academic Factors	71
A.T.M. Shakil Ahamed, Navid Tanzeem Mahmood and Rashedur M. Rahman	

A Super-Vector Deep Learning Coprocessor with High Performance-Power Ratio	81
Jingfei Jiang, Zhiqiang Liu, Jinwei Xu and Rongdong Hu	
Part II Big Data and Collaborative Decision Support Systems	
Bi-temporal Database Model for Legal Merger Transactions and Late-Arriving Information Problem: The Case of Polish Merger Market	95
Aleksander Buczek and Jacek Mercik	
Breathing Movement Analysis for Adjustment of Radiotherapy Planning	105
M. Penhaker, M. Novakova, J. Knybel, J. Kubicek, J. Grepl, V. Kasik and T. Zapletal	
Measuring Improvement in Access to Complete Data in Healthcare Collaborative Database Systems	117
Nurul A. Emran, Fathin N.M. Leza and Noraswaliza Abdullah	
Rough Set Theory for Supporting Decision Making on Relevance in Browsing Multilingual Digital Resources	129
Jolanta Mizera-Pietraszko and Jolanta Tancula	
The Social Influence on the Behavioral Intention to Use Mobile Electronic Medical Records	141
Yi-Hong Lai	
Stock Prices Growth Pattern by the Emergency Demand After the Great East-Japan Earthquake	151
Kenji Yamaguchi, Yuriko Yano and Yukari Shiota	
Structure-Based Virtual Screening for Novel Modulators of Human Orexin 2 Receptor with Cloud Systems and Supercomputers	161
Rafael Dolezal, Eugenie Nepovimova, Michaela Melikova and Kamil Kuca	
Supply Chains of Cross-Border e-Commerce	173
Arkadiusz Kawa	
Towards a Personalized Virtual Customer Experience	185
Bartłomiej Pierański and Sergyusz Strykowski	
Towards Big Management	197
Marcin Hernes and Andrzej Bytniewski	

Part III Computer Vision Analysis, Detection, Tracking and Recognition

Combination of Collision Detection and Visibility Algorithms in Simulation of the Effective Placement of Anti-air Elements 213
 Dalibor Cimr, Richard Cimler and Hana Tomášková

A Combination of Deep Learning and Hand-Designed Feature for Plant Identification Based on Leaf and Flower Images 223
 Thi Thanh-Nhan Nguyen, Thi-Lan Le, Hai Vu, Huy-Hoang Nguyen and Van-Sam Hoang

An Efficient Defect Classification Algorithm for Ceramic Tiles 235
 Khaled Ragab and Nahed Alsharay

Parking Assistant—Prediction of an Empty Parking Space in Time. 249
 Jan Tobola, Jan Dvorak and Ondrej Krejcar

Recent Advances in the Field of Foreground Detection: An Overview 261
 Ajmal Shahbaz, Laksono Kurnianggoro, Wahyono and Kang-Hyun Jo

Tracking of Bone Reparation Process with Using of Periosteal Callus Extraction Based on Fuzzy C-means Algorithm 271
 Jan Kubicek, Marek Penhaker, Iveta Bryjova, Martin Augustynek, Tomas Zapletal and Vladimir Kasik

Part IV Data-Intensive Text Processing

Automatic Post-editing of Kazakh Sentences Machine Translated from English 283
 Assem Abeustanova and Ualsher Tukeyev

Complex Technology of Machine Translation Resources Extension for the Kazakh Language 297
 Diana Rakhimova and Zhandos Zhumanov

Enhancing Latent Semantic Analysis by Embedding Tagging Algorithm in Retrieving Malay Text Documents 309
 Nurazzah Abd Rahman, Afiqah Bazlla Md Soom and Normaly Kamal Ismail

Exploiting Distance Graph and Hidden Topic Models for Multi-label Text Classification 321
 Thi-Ngan Pham, Van-Hien Tran, Tri-Thanh Nguyen and Quang-Thuy Ha

Financial Reports and Financial News—An Information Content Gap Analysis 333
 Jia-Lang Seng, Kuan-Ying Huang and Hsiao-Fang Yang

The Great National Photocorpus of 20th-Century Vietnamese. Origins, Assumptions and Goals 343
 Piotr Wierzchoń

The Impact of User Sentiment Aroused by The-Day-of-the-Week on the Recommendation Effectiveness in Microblog 355
 Shih Yun Weng, Ping Yu Hsu, Ming Shien Cheng and Phan-Anh-Huy Nguyen

Multi-sentence Compression Using Word Graph and Integer Linear Programming 367
 Dung Tran Tuan, Nam Van Chi and Minh-Quoc Nghiem

A Performance Comparison of Feature Extraction Methods for Sentiment Analysis 379
 Lai Po Hung and Rayner Alfred

A Study of Plagiarism Checker System Based on Chinese Word Segmentation and SQL Intersection Operation Technique 391
 Ming-Hsiung Ying, Jui-Wen Fan and Hsiu-Min Yu

Text Summarization Based on Classification Using ANFIS 405
 Yogan Jaya Kumar, Fong Jia Kang, Ong Sing Goh and Atif Khan

Part V Innovations in Web and Internet Technologies

Analysis of Indoor Positioning Based on BLE 421
 Wenjun Zhu, Shinheon Kim, Jaemin Hong and Chonggun Kim

A Fusion Technique of Schema and Syntax Rules for Validating Open Data 431
 Shin'ya Yamaguchi and Kimio Kuramitsu

Job Description Language for a Browser-Based Computing Platform—A Preliminary Report 443
 Arkadiusz Danilecki, Tomasz Fabisiak and Maciej Kaszubowski

Measuring the Effectiveness of Knowledge Driven Web Applications 455
 Supriya Chakraborty, Novarun Deb and Nabendu Chaki

Responsive Data Table Solution with New Scrolling Control Gesture for Better User Experience 467
 Lukáš Čegan

Part VI New Methods and Applications in Software Engineering

Adaptation of an ANN-Based Air Quality Forecasting Model to a New Application Area 479
 Cezary Orłowski, Arkadiusz Sarzyński, Kostas Karatzas, Nikos Katsifarakis and Joanicjusz Nazarko

Checking Compliance of Program with SecureUML Model 489
 Thanh-Nhan Luong, Van-Khanh To and Ninh-Thuan Truong

Generation of Test Data Using Genetic Algorithm and Constraint Solver 499
 Ngoc-Thi Dinh, Hieu-Dinh Vo, Thi-Dao Vu and Viet-Ha Nguyen

Investigating the Issues of Using Agile Methods in Offshore Software Development in Sri Lanka 515
 V.N. Vithana, D. Asirvatham and M.G.M. Johar

A Method for Automated Test Cases Generation from UML Models with String Constraints 525
 Thi Dao Vu, Pham Ngoc Hung and Viet Ha Nguyen

Mobile Application for Calculation of Optimal Route Between Searched Points of Interest 537
 Veronika Nemeckova, Jan Dvorak and Ondrej Krejcar

On Implementation of the Assumption Generation Method for Component-Based Software Verification 549
 Chi-Luan Le, Hoang-Viet Tran and Pham Ngoc Hung

Author Index 559



<http://www.springer.com/978-3-319-56659-7>

Advanced Topics in Intelligent Information and
Database Systems

Król, D.; Nguyen, N.T.; Shirai, K. (Eds.)

2017, XIII, 561 p. 171 illus., 101 illus. in color.,

Hardcover

ISBN: 978-3-319-56659-7