Contents – Part II

The Influence of Client Platform on Web Page Content: Measurements, Analysis, and Implications .......................................................... 1
    Sean Sanders, Gautam Sanka, Jay Aikat, and Jasleen Kaur

Aspect and Ratings Inference with Aspect Ratings: Supervised Generative Models for Mining Hotel Reviews .................................. 17
    Wei Xue, Tao Li, and Naphtali Rishe

A Web-Based Application for Semantic-Driven Food Recommendation with Reference Prescriptions ......................................................... 32
    Devis Bianchini, Valeria De Antonellis, and Michele Melchiori

Incorporating Cohesiveness into Keyword Search on Linked Data. ........... 47
    Ananya Dass, Aggeliki Dimitriou, Cem Aksoy, and Dimitri Theodoratos

Privacy-Enhancing Range Query Processing over Encrypted Cloud Databases. ..................................................................................... 63
    Jialin Chi, Cheng Hong, Min Zhang, and Zhenfeng Zhang

Multi-Window Based Ensemble Learning for Classification of Imbalanced Streaming Data ................................................................. 78
    Ye Wang, Hu Li, Hua Wang, Bin Zhou, and Yanchun Zhang

A Dynamic Key Length Based Approach for Real-Time Security Verification of Big Sensing Data Stream ........................................... 93
    Deepak Puthal, Surya Nepal, Rajiv Ranjan, and Jinjun Chen

Detecting Internet Hidden Paid Posters Based on Group and Individual Characteristics .............................................................. 109
    Xiang Wang, Bin Zhou, Yan Jia, and Shasha Li

A Soft Subspace Clustering Method for Text Data Using a Probability Based Feature Weighting Scheme .................................................. 124
    Abdul Wahid, Xiaoying Gao, and Peter Andreae

Using Web Collaboration to Create New Physical Learning Objects .......... 139
    André Peres, Evandro Manara Miletto, Fabiana Lorenzi, Elidiane Zayaeskoski, Gianfranco Meneguz, and Ramon Costa da Silva

A Custom Browser Architecture to Execute Web Navigation Sequences .... 149
    José Losada, Juan Raposo, Alberto Pan, Paula Montoto, and Manuel Álvarez
File Relation Graph Based Malware Detection Using Label Propagation
Ming Ni, Qianmu Li, Hong Zhang, Tao Li, and Jun Hou

164

Cross-Domain Collaborative Recommendation by Transfer Learning
of Heterogeneous Feedbacks
Jun Wang, Shijun Li, Sha Yang, Yonggang Ding, and Wei Yu

177

Research on Automate Discovery of Deep Web Interfaces
Feiyue Ye and Hang Yu

191

Discovering Functional Dependencies in Vertically Distributed Big Data
Weibang Li, Zhanhuai Li, Qun Chen, Tao Jiang, and Hailong Liu

199

Semi-supervised Document Clustering via Loci
Taufik Sutanto and Richi Nayak

208

Differentiating Sub-groups of Online Depression-Related Communities
Using Textual Cues
Thin Nguyen, Bridianne O’Dea, Mark Larsen, Dinh Phung,
Svetha Venkatesh, and Helen Christensen

216

A New Webpage Classification Model Based on Visual Information
Using Gestalt Laws of Grouping
Zhen Xu and James Miller

225

Extracting Records and Posts from Forum Pages with Limited Supervision
Luciano Barbosa and Guilherme Ferreira

233

Improving Relation Extraction by Using an Ontology Class Hierarchy
Feature
Pedro H.R. Assis, Marco A. Casanova, Alberto H.F. Laender,
and Ruy Milidiu

241

Crisis Mapping During Natural Disasters via Text Analysis of Social Media
Messages
Stefano Cresci, Andrea Cimino, Felice Dell’Orletta,
and Maurizio Tesconi

250

Tweet Location Inference Based on Contents and Temporal Association
Saki Ueda, Yuto Yamaguchi, Hiroyuki Kitagawa,
and Toshiyuki Amagasa

259

Finding Influential Users and Popular Contents on Twitter
Zhaoyun Ding, Hui Wang, Liang Guo, Fengcai Qiao, Jianping Cao,
and Dayong Shen

267
Exploring Social Network Information for Solving Cold Start in Product Recommendation .......................... 276
Chaozhuo Li, Fang Wang, Yang Yang, Zhoujun Li, and Xiaoming Zhang

The Detection of Multiple Dim Small Targets Based on Iterative Density Clustering and SURF Descriptor ........... 284
Haiying Zhang, Yang Gao, and Tao Li

Collaborative Content-Based Method for Estimating User Reputation in Online Forums .......................... 292
Amine Abdaoui, Jérôme Azé, Sandra Bringay, and Pascal Poncelet

Fusion of Big RDF Data: A Semantic Entity Resolution and Query Rewriting-Based Inference Approach ............. 300
Salima Benbernou, Xin Huang, and Mourad Ouziri

Enhancing Social Recommendation with Sentiment Communities ........... 308
Davide Feltoni Gurini, Fabio Gasparetti, Alessandro Micarelli, and Giuseppe Sansonetti

Trending Topics Rank Prediction .......................... 316
Soyeon Caren Han, Hyunsuk Chung, and Byeong Ho Kang

Moving Video Mapper and City Recorder with Geo-Referenced Videos .......... 324
Guangqiang Zhao, Mingjin Zhang, Tao Li, Shu-Ching Chen, Ouri Wolfson, and Naphtali Rishe

WebGC Gossiping on Browsers Without a Server [Live Demo/Poster] .......... 332
Raziel Carvajal-Gómez, Davide Frey, Matthieu Simonin, and Anne-Marie Keramarrec

Service Discovery for Spontaneous Communities in Pervasive Environments .................. 337
Ghada Ben Nejma, Philippe Roose, Marc Dalmau, and Jérôme Gensel

C3PO: A Network and Application Framework for Spontaneous and Ephemeral Social Networks .................. 348
Antoine Boutet, Stephane Frenot, Frederique Laforest, Pascale Launay, Nicolas Le Sommer, Yves Maheo, and Damien Reimert

Towards a Unified Framework for Data Cleaning and Data Privacy ........... 359
Yu Huang and Fei Chiang

A Data Quality Framework for Customer Relationship Analytics ........... 366
Fei Chiang and Siddharth Sitaramachandran
Inter-rater Reliability in Determining the Types of Vegetation on Railway Trackbeds .................................................. 379
  Roger G. Nyberg, Siril Yella, Narendra K. Gupta, and Mark Dougherty

Reliability of Manual Assessments in Determining the Types of Vegetation on Railway Tracks .................................................. 391
  Siril Yella, Roger G. Nyberg, Narendra K. Gupta, and Mark Dougherty

A Comparison of Patent Classifications with Clustering Analysis ............... 400
  Mick Smith and Rajeev Agrawal

Combination of Evaluation Methods for Assessing the Quality of Service for Express Delivery Industry .................................. 414
  Qing Lou, Shao-zhong Zhang, and William Wei Song

Geographical Constraint and Temporal Similarity Modeling for Point-of-Interest Recommendation ........................................ 426
  Huimin Wu, Jie Shao, Hongzhi Yin, Heng Tao Shen, and Xiaofang Zhou

A Classification-Based Demand Trend Prediction Model in Cloud Computing ................................................................. 442
  Qifeng Zhou, Bin Xia, Yexi Jiang, Qianmu Li, and Tao Li

Query Monitoring and Analysis for Database Privacy - A Security Automata Model Approach ........................................ 458
  Anand Kumar, Jay Ligatti, and Yi-Cheng Tu

Correlation-Based Deep Learning for Multimedia Semantic Concept Detection ................................................................. 473
  Hsin-Yu Ha, Yimin Yang, Samira Pouyanfar, Haiman Tian, and Shu-Ching Chen

Social Network Privacy: Issues and Measurement .................................. 488
  Isabel Casas, Jose Hurtado, and Xingquan Zhu

Building Secure Web Systems Architectures Using Security Patterns ........... 503
  Eduardo B. Fernandez

The WordNet Database: Form, Function, and Use ............................... 504
  Mark A. Finlayson

Author Index .................................................. 505
## Contents – Part I

<table>
<thead>
<tr>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grouping Product Aspects from Short Texts Using Multiple Classifiers</td>
<td>1</td>
</tr>
<tr>
<td>Daniel Kailer, Peter Mandl, and Alexander Schill</td>
<td></td>
</tr>
<tr>
<td>Time-Dependent Popular Routes Based Trajectory Outlier Detection</td>
<td>16</td>
</tr>
<tr>
<td>Jie Zhu, Wei Jiang, An Liu, Guanfeng Liu, and Lei Zhao</td>
<td></td>
</tr>
<tr>
<td>Temporally Enhanced Ontologies in OWL: A Shared Conceptual Model</td>
<td>31</td>
</tr>
<tr>
<td>and Reference Implementation</td>
<td></td>
</tr>
<tr>
<td>Sven de Ridder and Flavius Frasincar</td>
<td></td>
</tr>
<tr>
<td>HV: A Feature Based Method for Trajectory Dataset Profiling</td>
<td>46</td>
</tr>
<tr>
<td>Wei Jiang, Jie Zhu, Jiajie Xu, Zhixu Li, Pengpeng Zhao, and Lei Zhao</td>
<td></td>
</tr>
<tr>
<td>A Dynamically Extensible Open Cross-Document Link Service</td>
<td>61</td>
</tr>
<tr>
<td>Ahmed A.O. Tayeh and Beat Signer</td>
<td></td>
</tr>
<tr>
<td>Twitter Sarcasm Detection Exploiting a Context-Based Model</td>
<td>77</td>
</tr>
<tr>
<td>Zelin Wang, Zhijian Wu, Ruimin Wang, and Yafeng Ren</td>
<td></td>
</tr>
<tr>
<td>Ranked Reverse Boolean Spatial Keyword Nearest Neighbors Search</td>
<td>92</td>
</tr>
<tr>
<td>Hailin Fang, Pengpeng Zhao, Victor S. Sheng, Zhixu Li, Jiajie Xu,</td>
<td></td>
</tr>
<tr>
<td>Jian Wu, and Zhiming Cui</td>
<td></td>
</tr>
<tr>
<td>GraSS: An Efficient Method for RDF Subgraph Matching</td>
<td>108</td>
</tr>
<tr>
<td>Xuedong Lyu, Xin Wang, Yuan-Fang Li, Zhiyong Feng, and Junhu Wang</td>
<td></td>
</tr>
<tr>
<td>FreeS: A Fast Algorithm to Discover Frequent Free Subtrees Using a</td>
<td>123</td>
</tr>
<tr>
<td>Novel Canonical Form</td>
<td></td>
</tr>
<tr>
<td>Israt J. Chowdhury and Richi Nayak</td>
<td></td>
</tr>
<tr>
<td>Time-Sensitive Topic Derivation in Twitter</td>
<td>138</td>
</tr>
<tr>
<td>Robertus Nugroho, Weiliang Zhao, Jian Yang, Cecile Paris,</td>
<td></td>
</tr>
<tr>
<td>Surya Nepal, and Yan Mei</td>
<td></td>
</tr>
<tr>
<td>OSCAR: OpenStreetMap Planet at Your Fingertips via OSm</td>
<td>153</td>
</tr>
<tr>
<td>Cell ARrangements</td>
<td></td>
</tr>
<tr>
<td>Daniel Bahrdt and Stefan Funke</td>
<td></td>
</tr>
<tr>
<td>Creating Diverse Product Review Summaries: A Graph Approach</td>
<td>169</td>
</tr>
<tr>
<td>Natwar Modani, Elham Khabiri, Harini Srinivasan, and James Caverlee</td>
<td></td>
</tr>
<tr>
<td>Implicit Trust and Distrust Prediction for Recommender Systems</td>
<td>185</td>
</tr>
<tr>
<td>Xiao Ma, Hongwei Lu, and Zaobin Gan</td>
<td></td>
</tr>
</tbody>
</table>
Combining Syntactic and Semantic Evidence for Improving Matching over Linked Data Sources ................................. 200
   Klitos Christodoulou, Alvaro A.A. Fernandes, and Norman W. Paton

An Efficient Location-Aware Publish/Subscribe Index with Boolean Expressions ............................................. 216
   Hanhan Jiang, Pengpeng Zhao, Victor S. Sheng, Guanfeng Liu, An Liu, Jian Wu, and Zhiming Cui

EPC Graph Information Service: Enhanced Object Traceability on Unified and Linked EPCIS Events ......................... 232
   Jaewook Byun and Daeyoung Kim

A Mashup Architecture with Modeling and Simulation as a Service ............. 247
   Sixuan Wang and Gabriel Wainer

Temporal PageRank on Social Networks ................................. 262
   Weishu Hu, Haitao Zou, and Zhiguo Gong

Improving Marketing Interactions by Mining Sequences ................................. 277
   Ritwik Sinha, Sanket Mehta, Tapan Bohra, and Adit Krishnan

A Majority of Wrongs Doesn’t Make It Right - On Crowdsourcing Quality for Skewed Domain Tasks ..................... 293
   Kinda El Maarry, Ulrich Güntzer, and Wolf-Tilo Balke

Modelling Processes of Big Data Analytics .................................. 309
   Verena Kantere and Maxim Filatov

WISEngineering: Achieving Scalability and Extensibility in Massive Online Learning ........................................... 323
   Xiang Fu, Tyler Befferman, Jennie Chiu, and M.D. Burghardt

A Non-parametric Approach to the Multi-channel Attribution Problem. ....... 338
   Meghanath Macha Yadagiri, Shiv Kumar Saini, and Ritwik Sinha

A Dynamic-Static Approach of Model Fusion for Document Similarity Computation ......................................... 353
   Jiyi Li, Yasuhito Asano, Toshiyuki Shimizu, and Masatoshi Yoshikawa

Genetic-Based Approach for ATS and SLA-aware Web Services Composition ................................................. 369
   Imed Abbassi, Mohamed Graiet, Walid Gaaloul, and Nejib Ben Hadj-Alouane

Crawling Ranked Deep Web Data Sources .................................. 384
   Yan Wang, Yaxin Li, Nannan Pi, and Jianguo Lu
Influence Maximization in Signed Social Networks
Chengguang Shen, Ryo Nishide, Ian Piumarta, Hideyuki Takada, and Wenxin Liang

Analyzing File-to-File Relation Network in Malware Detection
Lingwei Chen, William Hardy, Yanfang Ye, and Tao Li

Similarity-Based Context-Aware Recommendation
Yong Zheng, Bamshad Mobasher, and Robin Burke

ECS: A Framework for Diversified and Relevant Search in the Internet of Things
Ali Shemshadi, Lina Yao, Yongrui Qin, Quan Z. Sheng, and Yihong Zhang

Sense and Focus: Towards Effective Location Inference and Event Detection on Twitter
Yihong Zhang, Claudia Szabo, and Quan Z. Sheng

A Hybrid Feature Selection Method for Predicting User Influence on Twitter
Yan Mei, Zizhu Zhang, Weiliang Zhao, Jian Yang, and Robertus Nugroho

Classifying Perspectives on Twitter: Immediate Observation, Affection, and Speculation
Yihong Zhang, Claudia Szabo, Quan Z. Sheng, and Xiu Susie Fang

Evaluating \( k \) Nearest Neighbor Query on Road Networks with no Information Leakage
Lu Wang, Ruxia Ma, and Xiaofeng Meng

Similarity Search over Personal Process Description Graph
Jing Ouyang Hsu, Hye-young Paik, and Liming Zhan

Nacéra Bennacer, Mia Johnson Vioulès, Maximiliano Ariel López, and Gianluca Quercini

Adaptive Focused Crawling of Linked Data
Ran Yu, Ujwal Gadiraju, Besnik Fetahu, and Stefan Dietze

Trust-Based Coalition Formation for Dynamic Service Composition in Social Networks
Amine Louati, Joyce El Haddad, and Suzanne Pinson
Web Information Systems Engineering – WISE 2015
16th International Conference, Miami, FL, USA,
November 1-3, 2015, Proceedings, Part II
2015, XVIII, 508 p. 190 illus. in color., Softcover
ISBN: 978-3-319-26186-7