

Table of Contents – Part III

Ensembles

AR-Boost: Reducing Overfitting by a Robust Data-Driven Regularization Strategy	1
<i>Baidya Nath Saha, Gautam Kunapuli, Nilanjan Ray, Joseph A. Maldjian, and Sriraam Natarajan</i>	
Parallel Boosting with Momentum	17
<i>Indraneel Mukherjee, Kevin Canini, Rafael Frongillo, and Yoram Singer</i>	
Inner Ensembles: Using Ensemble Methods Inside the Learning Algorithm.....	33
<i>Houman Abbasian, Chris Drummond, Nathalie Japkowicz, and Stan Matwin</i>	

Statistical Learning

Learning Discriminative Sufficient Statistics Score Space for Classification	49
<i>Xiong Li, Bin Wang, Yuncai Liu, and Tai Sing Lee</i>	
The Stochastic Gradient Descent for the Primal L1-SVM Optimization Revisited	65
<i>Constantinos Panagiotakopoulos and Petroula Tsampouka</i>	
Bundle CDN: A Highly Parallelized Approach for Large-Scale ℓ_1 -Regularized Logistic Regression	81
<i>Yatao Bian, Xiong Li, Mingqi Cao, and Yuncai Liu</i>	
MORD: Multi-class Classifier for Ordinal Regression	96
<i>Kostiantyn Antoniuk, Vojtěch Franc, and Václav Hlaváč</i>	
Identifiability of Model Properties in Over-Parameterized Model Classes	112
<i>Manfred Jaeger</i>	

Semi-supervised Learning

Exploratory Learning	128
<i>Bhavana Dalvi, William W. Cohen, and Jamie Callan</i>	

Semi-supervised Gaussian Process Ordinal Regression 144
P.K. Srijith, Shirish Shevade, and S. Sundararajan

Influence of Graph Construction on Semi-supervised Learning 160
*Celso André R. de Sousa, Solange O. Rezende, and
Gustavo E.A.P.A. Batista*

Tractable Semi-supervised Learning of Complex Structured Prediction
Models 176
Kai-Wei Chang, S. Sundararajan, and S. Sathya Keerthi

PSSDL: Probabilistic Semi-supervised Dictionary Learning 192
*Behnam Babagholami-Mohamadabadi, Ali Zarghami,
Mohammadreza Zolfaghari, and Mahdieh Soleymani Baghshah*

Unsupervised Learning

Embedding with Autoencoder Regularization 208
*Wenchao Yu, Guangxiang Zeng, Ping Luo, Fuzhen Zhuang,
Qing He, and Zhongzhi Shi*

Reduced-Rank Local Distance Metric Learning 224
*Yinjie Huang, Cong Li, Michael Georgiopoulos, and
Georgios C. Anagnostopoulos*

Learning Exemplar-Represented Manifolds in Latent Space
for Classification 240
Shu Kong and Donghui Wang

Locally Linear Landmarks for Large-Scale Manifold Learning 256
Max Vladymyrov and Miguel Á. Carreira-Perpiñán

Subgroup Discovery, Outlier Detection and Anomaly
Detection

Discovering Skylines of Subgroup Sets 272
Matthijs van Leeuwen and Antti Ukkonen

Difference-Based Estimates for Generalization-Aware Subgroup
Discovery 288
Florian Lemmerich, Martin Becker, and Frank Puppe

Local Outlier Detection with Interpretation 304
*Xuan Hong Dang, Barbora Micenková, Ira Assent, and
Raymond T. Ng*

Anomaly Detection in Vertically Partitioned Data by Distributed Core Vector Machines	321
<i>Marco Stolpe, Kanishka Bhaduri, Kamalika Das, and Katharina Morik</i>	

Mining Outlier Participants: Insights Using Directional Distributions in Latent Models	337
<i>Didi Surian and Sanjay Chawla</i>	

Privacy and Security

Anonymizing Data with Relational and Transaction Attributes	353
<i>Giorgos Poulis, Grigorios Loukides, Aris Gkoulalas-Divanis, and Spiros Skiadopoulos</i>	

Privacy-Preserving Mobility Monitoring Using Sketches of Stationary Sensor Readings	370
<i>Michael Kamp, Christine Kopp, Michael Mock, Mario Boley, and Michael May</i>	

Evasion Attacks against Machine Learning at Test Time	387
<i>Battista Biggio, Igino Corona, Davide Maiorca, Blaine Nelson, Nedim Šrndić, Pavel Laskov, Giorgio Giacinto, and Fabio Roli</i>	

Data Mining and Constraint Solving

The Top- k Frequent Closed Itemset Mining Using Top- k SAT Problem	403
<i>Said Jabbour, Lakhdar Sais, and Yakoub Salhi</i>	

A Declarative Framework for Constrained Clustering	419
<i>Thi-Bich-Hanh Dao, Khanh-Chuong Duong, and Christel Vrain</i>	

SNNAP: Solver-Based Nearest Neighbor for Algorithm Portfolios	435
<i>Marco Collautti, Yuri Malitsky, Deepak Mehta, and Barry O'Sullivan</i>	

Evaluation

Area under the Precision-Recall Curve: Point Estimates and Confidence Intervals	451
<i>Kendrick Boyd, Kevin H. Eng, and C. David Page</i>	

Applications

Incremental Sensor Placement Optimization on Water Network	467
<i>Xiaomin Xu, Yiqi Lu, Sheng Huang, Yanghua Xiao, and Wei Wang</i>	

Detecting Marionette Microblog Users for Improved Information Credibility	483
<i>Xian Wu, Ziming Feng, Wei Fan, Jing Gao, and Yong Yu</i>	
Will My Question Be Answered? Predicting “Question Answerability” in Community Question-Answering Sites	499
<i>Gideon Dror, Yoelle Maarek, and Idan Szpektor</i>	
Learning to Detect Patterns of Crime	515
<i>Tong Wang, Cynthia Rudin, Daniel Wagner, and Rich Sevieri</i>	
Space Allocation in the Retail Industry: A Decision Support System Integrating Evolutionary Algorithms and Regression Models	531
<i>Fábio Pinto and Carlos Soares</i>	

Medical Applications

Forest-Based Point Process for Event Prediction from Electronic Health Records	547
<i>Jeremy C. Weiss and C. David Page</i>	
On Discovering the Correlated Relationship between Static and Dynamic Data in Clinical Gait Analysis	563
<i>Yin Song, Jian Zhang, Longbing Cao, and Morgan Sangeux</i>	
Computational Drug Repositioning by Ranking and Integrating Multiple Data Sources	579
<i>Ping Zhang, Pankaj Agarwal, and Zoran Obradovic</i>	
Score As You Lift (SAYL): A Statistical Relational Learning Approach to Uplift Modeling	595
<i>Houssam Nassif, Finn Kuusisto, Elizabeth S. Burnside, C. David Page, Jude Shavlik, and Vítor Santos Costa</i>	

Nectar Track

A Theoretical Framework for Exploratory Data Mining: Recent Insights and Challenges Ahead	612
<i>Tijl De Bie and Eirini Spyropoulou</i>	
Tensor Factorization for Multi-relational Learning	617
<i>Maximilian Nickel and Volker Tresp</i>	
MONIC and Followups on Modeling and Monitoring Cluster Transitions	622
<i>Myra Spiliopoulou, Eirini Ntoutsi, Yannis Theodoridis, and Rene Schult</i>	

Towards Robot Skill Learning: From Simple Skills to Table Tennis	627
<i>Jan Peters, Jens Kober, Katharina Mülling, Oliver Krömer, and Gerhard Neumann</i>	

Functional MRI Analysis with Sparse Models	632
<i>Irina Rish</i>	

Demo Track

Image Hub Explorer: Evaluating Representations and Metrics for Content-Based Image Retrieval and Object Recognition	637
<i>Nenad Tomašev and Dunja Mladenić</i>	

Iipseity – A Laboratory for Synthesizing and Validating Artificial Cognitive Systems in Multi-agent Systems	641
<i>Fabrice Lauri, Nicolas Gaud, Stéphane Galland, and Vincent Hilaire</i>	

OpenML: A Collaborative Science Platform	645
<i>Jan N. van Rijn, Bernd Bischl, Luis Torgo, Bo Gao, Venkatesh Umaashankar, Simon Fischer, Patrick Winter, Bernd Wiswedel, Michael R. Berthold, and Joaquin Vanschoren</i>	

ViperCharts: Visual Performance Evaluation Platform	650
<i>Borut Šluban and Nada Lavrač</i>	

Entityclassifier.eu: Real-Time Classification of Entities in Text with Wikipedia	654
<i>Milan Dojchinovski and Tomáš Kliegr</i>	

Hermoupolis: A Trajectory Generator for Simulating Generalized Mobility Patterns	659
<i>Nikos Pelekis, Christos Ntrigkogas, Panagiotis Tampakis, Stylianios Sideridis, and Yannis Theodoridis</i>	

AllAboard: A System for Exploring Urban Mobility and Optimizing Public Transport Using Cellphone Data	663
<i>Michele Berlingerio, Francesco Calabrese, Giusy Di Lorenzo, Rahul Nair, Fabio Pinelli, and Marco Luca Sbodio</i>	

ScienScan – An Efficient Visualization and Browsing Tool for Academic Search	667
<i>Daniil Mirylenka and Andrea Passerini</i>	

InVis: A Tool for Interactive Visual Data Analysis	672
<i>Daniel Paurat and Thomas Gärtner</i>	

Kanopy: Analysing the Semantic Network around Document Topics	677
<i>Ioana Hulpuş, Conor Hayes, Marcel Karnstedt, Derek Greene, and Marek Jozwowiec</i>	
SCCQL : A Constraint-Based Clustering System	681
<i>Antoine Adam, Hendrik Blockeel, Sander Govers, and Abram Aertsen</i>	
Author Index	685