

Index

A

abrasive flow machining (AFM) 109
 aggregate functions 32
 American National Election Studies
 (ANES) 307, 313
 antisymmetric 39
 apriori algorithm 62
 artificial neural networks (ANN) 345
 association rule mining 59, 60–62
 association rules 1, 36–57
 association rules, mining from XML data
 58–70
 association rules, mining of 3

B

Bayesian classifiers 149–150
 Boston 242
 business interestingness 204

C

classification task 146
 clustering 59, 97
 clustering, fuzzy 97

clustering, fuzzy C-means 107
 clustering, hierarchical 98
 clustering, partitional 98
 clustering algorithms 100–102
 clusters, crisp or fuzzy 97
 clusters, optimal 97
 collaboration, vertical 181
 communication, secure 178
 crime pattern mining 196

D

data, sequential or non-sequential 144
 data accuracy 253, 259
 data collection 175
 data cubes 1, 2
 data cubes, and sum-based aggregate
 measures 4
 data filtering 177
 data mining 58
 data mining, and clustering 117
 data mining, domain driven 195–222
 data mining, incremental or interactive 72
 data mining, in the social sciences 307–
 331

data mining, minimizing the minus sides of 253–278
 data mining, model free 223–252
 data mining, privacy preserving 174–194
 data mining, recent research focuses 142
 data mining, sequence 142
 data mining, stream 142
 data sampling 262
 dataset 37
 data standardization 259
 data visualization, problems 267
 decision tree (DT), problems 265
 decision trees 146, 147
 digital envelope 178
 digital literacy 36, 71
 dimensionality 234
 disaster recovery plans 268
 document object model (DOM) 65
 domain-driven in-depth pattern discovery (DDID-PD) 197
 domain intelligence 199, 205
 domain knowledge 213

E

electronic commerce 72
 encryption 176
 encryption, homomorphic 178
 entropy-based fuzzy clustering (EFC) 97

F

frequent itemset 61
 frequent pattern growth (FP-growth) 59
 frequent pattern growth (FP-growth) algorithm 63
 fuzzy c-means (FCM) algorithm 97
 fuzzy logic (FL), problems 267

G

gene ontology 287
 genetic algorithm 98
 genetic algorithm (GA), problems 266
 graphic semiology 2, 5

H

human and mining system 214

I

incremental Web traversal pattern mining (IncWTP) 80
 inductive logic programming, with DDI and PPI prediction 284
 intelligence, qualitative 196
 intelligence, quantitative 195
 interactive mining supports 216
 interactive Web traversal pattern mining (IntWTP) 84
 interestingness measures 37
 interestingness measures, objective 37
 interestingness measures, subjective 37

K

K-means clustering 117–141
 k-nearest neighbor (kNN) 147–148, 180
 k-nearest neighbor (kNN), computing of 187
 KDD, challenges 198
 knowledge, background 290
 knowledge actionability 200–201, 215
 knowledge base assisted incremental sequential pattern (KISP) 77
 knowledge discovery in databases (KDD) 143, 254

L

learning, one-stop 332–356
 lift 4
 Lipschitz coefficients 229
 loevinger 4

M

machine learning 117
 machine learning, and one-stop learning 332–356
 machine learning, in solving real-world applications 338
 maltreated children 319
 maximum likelihood method 122
 mining, of in-depth patterns 215
 multidimensional data 1
 multimedia mining 142

N

Naive Bayes (NB) 344
 National Survey on Child and Adolescent
 Well-Being (NSCAW) 309
 Nelder-Mead (N-M) simplex method 124
 neural network (NN), problems 264
 noise, to a signal 262
 nonlinear regression modeling problem
 223
 null value 263

O

objective measures, types of 44
 objective measures, visualising of 41
 online analytical processing (OLAP)\ 1
 online environment for mining association
 rules (OLEMAR) 1–35
 outliers 262

P

path traversal pattern mining 75
 Pfam 286
 privacy-preserving data mining, using
 cryptography for 174–194
 protein-protein interaction 279–306

R

randomization 176
 rbf kernel 117
 rule mining, approaches to 64–65

S

sampling 258
 sampling, of data 262
 search engine 339
 segmentation 258
 sequence and set similarity measure (S3M)
 159
 sequence data, advances in classification
 of 142
 sequential data 150–153
 sequential pattern mining 59, 76
 similarity metric 143
 social sciences 311

SOM 98

support vector machine (SVM) 148–
 149, 343
 SVM 148

T

text mining 142
 traversal sequence 72

V

visualization 2
 visual mining 142
 voting 313

W

Web logs 71
 Web mining 71–96, 142
 Web page categorization 334
 Web traversal 71–96
 Web traversal patterns, mining of 78
 World Wide Web, use of XML 58

X

XML 59
 XQuery 58

Z

Z-score 132