Index

A, B, C, D

- a priori algorithm, 89
- Accuracy, 116
- Ant Colony Optimization, 42
- Artificial Neural Networks, 113, 122
- Association rules, 15, 87
  - categorical, 94
  - encoding, 93, 99, 103
  - fuzzy, 102
  - quality measure, 90
  - quantitative, 99
  - representation, 93, 99, 103
  - task description, 88
- Big Data, 1
  - definitions, 3
  - situations, 2
- Classification, 12, 109
  - encoding, 126
  - feature selection, 135
  - performance analysis, 117
  - quality measure, 116
  - representation, 126
  - task description, 110
- Clustering, 14, 63
  - density-based method, 67
  - encoding, 76
  - partitioning method, 65
  - quality measure, 69
  - representation, 76
  - task description, 63
- Combinatorial Optimization, 24
- Confidence, 92
- Confusion matrix, 115
- Contingency table, 84
- Data sets, 20
- Datamining, 10
  - frameworks, 151, 153
  - tasks, 12, 16
- Decision trees, 111, 119

E, F, G, H

- Embedded approach, 137
- Encoding, 27, 76, 93, 99, 103, 126, 139
- Evolution Strategy, 39
- Evolutionary
  - Computation, 38
  - Programming, 40
- F-measure, 117
- Feature selection, 15, 135
  - performance analysis, 143
  - quality, 140
  - task description, 136
- Filter approach, 136, 141
- Frameworks, 147
- Genetic
  - Algorithm, 39
  - Programming, 40
Genomic, 2
Healthcare, 2
Hill Climbing, 33

I, J, K, L, M
Interest, 92
Jaccard coefficient, 85, 116
jmeasure, 92
K-Nearest-Neighbor, 110, 118
Knowledge discovery, 10
Local search, 31
Metaheuristics
  encoding, 27, 93, 99, 103, 126, 139
  frameworks, 147, 153
  multi-objective, 47, 83
  objective function, 28, 69, 96, 100,
    104, 127, 140
  operators, 97, 101, 105, 129, 140
  parallel, 55
  representation, 27, 93, 99, 103, 126,
    139
Multi-objective, 43, 75, 91, 142
metaheuristics, 47
  IBEA, 49
  local search, 50
  NSGA-II, 48
  SEEA, 50
  SPEA-II, 49
  models, 75
  optimization, 44

N, O, P, Q
Naive-Bayes, 112
Neighborhood, 31
Objective function, 28, 96, 100, 104, 127,
  140
Operators, 97, 101, 105, 129, 140
Parallel
  computation, 53
  quality measures, 60
  hardware model, 58
metaheuristics, 55
  population-based, 57
  single solution-based, 55
Parallelism, 53
Particle Swarm Optimization, 43
Partitioning method, 65
Performance analysis, 17, 29, 51, 60, 69,
  82, 117, 143
Population-based, 38, 57
Quality measure, 114, 116
  accuracy, 116
  confidence, 92
  error, 116
  F-measure, 117
  interest, 92
  Jaccard coefficient, 116
  jmeasure, 92
  precision, 116
  sensitivity, 116
  specificity, 116
  support, 92
  surprise, 92

R, S, T, W
Rand index, 85
  adjusted, 85
Regression, 12
Representation, 27, 76, 93, 99, 103, 126,
  139
Sensitivity, 116
Simulated Annealing, 35
Single solution-based, 31, 55
Social networks, 2
Specificity, 116
Speedup, 60
Support, 92
  Vector Machine (SVM), 114, 124
Surprise, 92
Swarm Intelligence, 41
Tabu Search, 34
Traffic management, 2
Wrapper approach, 137, 141