

Appendix C

The keywords and their PageRank scores that are included in each module of the alluvial diagram are provided in the following tables.

Subperiod 2007-2010	
Module 1	PageRank Score
ANONYMIZATION	0.0307
PRIVACY-ATTACK-MODEL	0.0218
K-ANONYMITY	0.0197
DATA-PUBLISHING	0.0137
BACKGROUND-KNOWLEDGE	0.0127
PRIVACY-PRESERVATION	0.0121
REAL-WORLD-DATASETS	0.0118
STRUCTURAL-PROPERTIES	0.0103
SOCIAL-NETWORK-ANALYSIS-(SNA)	0.00985
COMMUNITY-DETECTION-ALGORITHMS	0.00670
SUPPRESSION	0.00370
STRUCTURED-DATA	0.00278
SOCIAL-NETWORK	0.00206
LARGE-DATASET	0.000412
Module 2	PageRank Score
SPLIT-ALGORITHMS	0.0428
UNDIRECTED-GRAPH	0.0333
DATA-MINING	0.0206
RELATIONAL-DATA	0.0200
GENERALIZATION-APPROACH	0.0166
GRAPH-MATCHING-TECHNIQUE	0.00988
K-AUTOMORPHISM	0.00677
CLUSTERING-ALGORITHMS	0.00
Module 3	PageRank Score
POWER-LAW	0.0329
INPUT-GRAPH	0.0234
SYNTHETIC-GRAPH-GENERATION	0.0202
PRIVACY-PRESERVING-DATA-MINING-(PPDM)	0.0175
DEGREE-SEQUENCE	0.00686
DIFFERENTIAL-PRIVACY	0.00
GRAPH-MODIFICATION-APPROACH	0.00
Module 4	PageRank Score
SET-VALUED-DATA	0.0386
MATRIX-ALGEBRA	0.0290
LABEL-HIERARCHY	0.0195
GRAPH-ISOMORPHISM	0.0136
NEIGHBORHOOD-ATTACK	0.00
Module 5	PageRank Score
MICRODATA	0.0360
INFORMATION-LOSS	0.0265
GRAPH-DATA	0.0191
GREEDY-ALGORITHM	0.0152

SENSITIVE-ATTRIBUTES	0.00
Module 6	PageRank Score
PROBABILISTIC-GRAPH	0.0296
SHORTEST-PATH	0.0221
PAIRED-VERTICES-K-DEGREE-ANONYMITY	0.0154
RE-IDENTIFICATION-ATTACKS	0.0108
WEIGHTED-NETWORK	0.00919
LINK-PRIVACY	0.000412
Module 7	PageRank Score
LINK-DISCLOSURE	0.0230
IDENTITY-DISCLOSURE	0.0204
DYNAMIC-PROGRAMMING	0.00799
RANDOMIZATION-APPROACH	0.00410
Module 8	PageRank Score
SUBGRAPH	0.0273
EDGE-BETWEENNESS-CENTRALITY	0.0191
K-NEAREST-NEIGHBORS-ALGORITHM-(KNN)	0.00489
Module 9	PageRank Score
GRAPH-THEORY	0.0269
GRAPH-MINING	0.0163
EDGE-WEIGHT-ANONYMIZATION	0.00685
Module 10	PageRank Score
FACEBOOK	0.0198
PHISHING-ATTACK	0.0163
INTERSECTION-ATTACK	0.00678
Module 11	PageRank Score
DECISION-SUPPORT-SYSTEMS-(DSS)	0.0200
IDENTITY-INFORMATION-HIDING	0.0116
EIGENVECTOR-CENTRALITY	0.00357
TOPOLOGICAL-INFORMATION	0.00124
Module 12	PageRank Score
NP-HARD	0.0227
HOMOGENEITY-ATTACK	0.00520
STRUCTURAL-ATTACKS	0.00371
UTILITY	0.00
Module 13	PageRank Score
NOISY-OR	0.0170
LINK-MINING	0.00756
Module 14	PageRank Score
LINK-PREDICTION	0.0132
DYNAMIC-NETWORK	0.000412

Subperiod 2011-2014	
Module 1	PageRank Score
SOCIAL-NETWORK	0.0201
PRIVACY-PRESERVATION	0.0191
ANONYMIZATION	0.0150
STRUCTURAL-PROPERTIES	0.0111
GRAPH-THEORY	0.0106
K-ANONYMITY	0.0101
DATA-PUBLISHING	0.00984
DATA-MINING	0.00958
REAL-WORLD-DATASETS	0.00841
PRIVACY-ATTACK-MODEL	0.00834
PRIVACY-BREACH	0.00643
GENETIC-ALGORITHM-(GA)	0.00382
UNCERTAIN-GRAPHS	0.00170
STRUCTURAL-DISPARITY	0.00170
MUTUAL-FRIEND-ATTACK	0.00102
PERSONALIZED-ANONYMITY	0.000848
TARGET-NODES	0.000769
Module 2	PageRank Score
FUZZY-SET-THEORY	0.0130
MICROAGGREGATION	0.0111
MATRIX-DECOMPOSITION	0.0111
NOISE-ADDITION	0.0111
HUBS	0.0103
BRIDGES	0.0103
CRISP	0.0103
CLUSTERING-ALGORITHMS	0.00987
GRAPH-PARTITIONING	0.00884
GENERALIZATION-APPROACH	0.00830
Module 3	PageRank Score
DISTRIBUTED-ALGORITHM	0.0113
FRIENDSHIP-GRAPH	0.00963
INFORMATION-HUBS	0.00963
SOCIAL-RELATIONSHIPS	0.00963
K-MEANS	0.00920
MESSAGE-PASSING	0.00920
MODULAR-DECOMPOSITION	0.00920
Module 4	PageRank Score
DECISION-SUPPORT-SYSTEMS-(DSS)	0.0111
COMBINATORIAL-GRAPH	0.00927
INAPPROXIMABILITY	0.00927
PARAMETERIZED-COMPLEXITY	0.00927
EGO-NETWORK	0.00845
TRUST	0.00845

DEGREE-SEQUENCE	0.00643
PEER-TO-PEER-NETWORKS	0.00521
Module 5	PageRank Score
DIFFERENTIAL-PRIVACY	0.00979
CLUSTER-COEFFICIENT	0.00893
DIVIDE-AND-CONQUER-ALGORITHM	0.00877
GRAPH-MINING	0.00703
LAPLACE-NOISE	0.00701
GOVERNMENT-AFFAIRS-OFFICE-AUTOMATION	0.00388
WORKFLOW-GRAPH	0.00364
RANDOM-NETWORK	0.00364
Module 6	PageRank Score
(K,LAMBDA)-SIMILARITY	0.00900
HELLINGER-DISTANCE	0.00900
EDGE-WEIGHT-ANONYMIZATION	0.00900
OPTIMIZATION	0.00683
WEIGHTED-NETWORK	0.00652
BACKGROUND-KNOWLEDGE	0.00564
LABEL-BAG	0.00103
KERNEL-REGRESSION	0.000652
Module 7	PageRank Score
PERTURBATION-TECHNIQUES	0.0102
DESTINATION-NODES	0.00927
UNDIRECTED-GRAPH	0.00927
SOCIAL-NETWORK-ANALYSIS-(SNA)	0.00641
PARTITIONING-APPROACH	0.00630
EDGE-BETWEENNESS-CENTRALITY	0.00219
LINK-PRIVACY	0.00207
UNWEIGHTED-NETWORK	0.00125
Module 8	PageRank Score
RANDOM-PERTURBATION	0.00817
INFORMATION-THEORY	0.00778
RANDOMIZATION-APPROACH	0.00750
SMALL-WORLD-NETWORK	0.00685
LARGE-DATASET	0.00522
INTEGER-PROGRAMMING	0.00498
QUANTIFICATION	0.00360
HYBRID-ALGORITHMS	0.00112
Module 9	PageRank Score
WEIGHTED-MAXIMUM-COMMON-SUBGRAPH-(WMCS)	0.0107
COMPLETE-GRAPH	0.0107
DISTRIBUTED-ENVIRONMENT	0.0107
DISTRIBUTED-STORAGE	0.0107

Module 10	PageRank Score
GRAPH-DATA	0.00698
GRAPH-QUERIES	0.00597
REACHABILITY	0.00597
SPARSE-GRAPH	0.00557
CHARACTERISTIC-VECTOR	0.00557
GRAPH-MODIFICATION-APPROACH	0.00516
RE-IDENTIFICATION-ATTACKS	0.00450
Module 11	PageRank Score
LABELED-GRAPH	0.00629
BIPARTITE-GRAPH	0.00578
NP-HARD	0.00511
EDGE-ADDITION/DELETION	0.00474
NODE-DEGREE	0.00442
DYNAMIC-PROGRAMMING	0.00386
TABLE-GRAPHS	0.00283
RELATIONAL-CLASSIFIERS	0.00196
Module 12	PageRank Score
FACEBOOK	0.0105
CONFIDENTIALITY	0.00782
CENTRALITY-MEASURES	0.00781
LINKEDIN	0.00781
Module 13	PageRank Score
SUBGRAPH	0.00905
K-SUBSET-ANONYMITY	0.00825
DEGREE-CONSTRAINED-SUBGRAPHS	0.00825
DEGREE-CONSTRAINED-EDITING	0.00825
Module 14	PageRank Score
SYNTHETIC-GRAPH-GENERATION	0.00760
GRAPH-MODELS	0.00643
GRAPH-RECONSTRUCTION-ATTACK	0.00519
OUTPUT-PERTURBATION	0.00519
TOPOLOGICAL-STRUCTURE-SIMILARITY	0.00483
Module 15	PageRank Score
ENCRYPTION	0.00742
PRIVACY-PRESERVING-PATH-FINDING	0.00739
CONTROLLED-INFORMATION-SHARING	0.00739
PERSONALIZATION	0.00551
Module 16	PageRank Score
TOPOLOGICAL-INFORMATION	0.00741
TABULAR-DATA	0.00627
METRIC-EMBEDDING	0.00550
COMPLEX-ALGORITHMS	0.00550
IDENTITY-RE-IDENTIFICATION	0.00242
Module 17	PageRank Score

COMMUNITY-DETECTION-ALGORITHMS	0.00453
HYPERGRAPH-CLUSTERING	0.00449
IDENTITY-DISCLOSURE	0.00449
STRUCTURAL-ATTACKS	0.00442
MEASUREMENT	0.00334
Module 18	PageRank Score
NEIGHBORHOOD-INFORMATION	0.00709
CLOUD-COMPUTING	0.00709
INDISTINGUISHABILITY-PROBABILITY	0.00709
Module 19	PageRank Score
HEALTH-INFORMATION	0.00659
ROUGH-SET-THEORY	0.00586
PRIVACY-PRESERVING-DATA-MINING- (PPDM)	0.00458
CRYPTOGRAPHY	0.00403
Module 20	PageRank Score
RELATIONAL-DATA	0.00604
L-DIVERSITY	0.00526
SENSITIVE-ATTRIBUTES	0.00442
GREEDY-ALGORITHM	0.00200
NEIGHBORHOOD-ATTACK	0.00166
SEMI-EDGE-ANONYMITY	0.000999
Module 21	PageRank Score
UTILITY	0.00589
INFORMATION-LOSS	0.00376
EDGE-RELEVANCE	0.00174
GRAPH-ISOMORPHISM	0.00144
TIME-SERIAL-DATA	0.00112
Module 22	PageRank Score
T-CLOSENESS	0.00417
TWITTER	0.00417
Module 23	PageRank Score
SUPERVISED-MACHINE-LEARNING- ALGORITHMS	0.00416
UNDERLYING-GRAPH	0.00416
Module 24	PageRank Score
SEMI-SUPERVISED-CLUSTERING- ALGORITHMS	0.00403
EXTREME-LEARNING-MACHINE-(ELM)	0.00403
Module 25	PageRank Score
(K1,K2)-SHORTEST-PATH	0.00392
K-SHORTEST-PATH	0.00392
Module 26	PageRank Score
NEIGHBORHOOD-SUBGRAPH	0.00356
DYNAMIC-NETWORK	0.00356

Module 27	PageRank Score
STRUCTURED-DATA	0.00399
GRAPH-MATCHING-TECHNIQUE	0.00296
Module 28	PageRank Score
HEURISTIC-ALGORITHMS	0.00504
SENSITIVE-EDGES	0.000936
Module 29	PageRank Score
SHORTEST-PATH	0.00352
DIRECTED-GRAPH	0.00234
Module 30	PageRank Score
ARTIFICIAL-INTELLIGENCE-(AI)	0.00249
MACHINE-LEARNING	0.00143

Subperiod 2015-2018	
Module 1	PageRank Score
SOCIAL-NETWORK	0.0152
PRIVACY-PRESERVATION	0.0147
ANONYMIZATION	0.0112
GRAPH-THEORY	0.00865
K-ANONYMITY	0.00802
STRUCTURAL-PROPERTIES	0.00749
DATA-PUBLISHING	0.00712
ARTIFICIAL-INTELLIGENCE-(AI)	0.00691
CLUSTERING-ALGORITHMS	0.00689
DATA-MINING	0.00613
INFORMATION-LOSS	0.00577
PRIVACY-BREACH	0.00549
PRIVACY-ATTACK-MODEL	0.00524
BACKGROUND-KNOWLEDGE	0.00513
RE-IDENTIFICATION-ATTACKS	0.00366
BAYES-RULE	0.000761
BIPARTITE-GRAPH	0.000733
GEO-SOCIAL-NETWORK	0.000450
SEMI-STRUCTURED-DATA	0.000437
DYNAMIC-NETWORK	0.000363
ANT COLONY OPTIMIZATION (ACO)	0.0000912
Module 2	PageRank Score
CLUSTER-PURITY	0.0118
CLUSTER-ANALYSIS	0.0118
CATEGORICAL-DATA	0.0118
DBSCAN-ALGORITHM	0.0118
ROUGH-ENTROPY	0.0118
MOBILE-SOCIAL-NETWORK	0.0107
BETWEENNESS-CENTRALITY	0.00685
IMPORTANT-FEATURES	0.00685
TARGET-NODES	0.00685
Module 3	PageRank Score
VECTORS-SIMILARITY	0.00954
WEIGHTED-EUCLIDEAN-DISTANCE	0.00954
VECTOR-SET-MODEL-(VSM)	0.00954
EXISTENCE-PROBABILITY	0.00844
RANDOM-PERTURBATION	0.00718
WEIGHTED-NETWORK	0.00602
RANDOMIZATION-APPROACH	0.00569
TRIADIC-CLOSURE	0.00472
INJECTING-PROBABILITY	0.00472
Module 4	PageRank Score
NEIGHBORHOOD-INFORMATION	0.00684

CLOUD-COMPUTING	0.00593
UNDIRECTED-GRAPH	0.00552
K-NEIGHBORHOOD-ANONYMITY	0.00492
NEIGHBORHOOD-ATTACK	0.00445
ENCRYPTION	0.00434
GREEDY-ALGORITHM	0.00433
GRAPH-DATA	0.00404
FRIENDSHIP-ATTACK	0.00399
EDGE-CLUSTERING	0.00356
REACHABILITY-PRESERVING- ANONYMIZATION-(RPA)	0.00245
REACHABILITY	0.00244
QUANTIFICATION	0.00229
AVERAGE-SHORTEST-PATH-LENGTH- (APL)	0.00150
Module 5	PageRank Score
STATISTICAL-DISCLOSURE-ATTACK- (SDA)	0.00834
POWER-LAW	0.00834
SMALL-WORLD-NETWORK	0.00834
SOCIAL-NETWORK-ANALYSIS-(SNA)	0.00833
DEGREE-SEQUENCE	0.00644
RELATIONAL-DATA	0.00629
EMAIL-NETWORK	0.00603
GRAPH-METRICS	0.00132
GRAPH-SAMPLING	0.00105
Module 6	PageRank Score
HEURISTIC-ALGORITHMS	0.00747
PARAMETERIZED-COMPLEXITY	0.00640
OPTIMIZATION	0.00602
F-FACTORS	0.00587
KERNELIZATION	0.00587
COMBINATORIAL-OPTIMIZATION	0.00485
GENETIC-ALGORITHM-(GA)	0.00485
FIXED-PARAMETER-TRACTABILITY	0.00438
DEGREE-CONSTRAINED-EDITING	0.00438
Module 7	PageRank Score
CLOUD-STORAGE	0.00929
GENERAL-DATA-PROTECTION- REGULATION-(GDPR)	0.00929
ELLIPTIC-CURVE	0.00929
PUBLIC-KEY-ENCRYPTION-WITH- KEYWORD-SEARCH-(PEKS)	0.00929
CRYPTOGRAPHY	0.00812
Module 8	PageRank Score

PERTURBATION-TECHNIQUES	0.00666
LINK-PRIVACY	0.00664
PAIRED-VERTICES-K-DEGREE-ANONYMITY	0.00606
UNDERLYING-GRAPH	0.00546
FACEBOOK	0.00437
TWITTER	0.00437
DEGREE-OF-PAIRED-VERTICES-(DOPV)-ATTACK	0.00406
MULTI-NETWORK	0.00406
Module 9	PageRank Score
BIG-DATA	0.00533
ADVERSARY	0.00531
BIG-COMPONENT	0.00531
SOCIAL-RECOMMENDATIONS	0.00510
PERSONALIZATION	0.00510
LAPLACE-NOISE	0.00492
EMBEDDED-SYSTEMS	0.00433
CORRELATION-MATRIX	0.00158
Module 10	PageRank Score
UTILITY	0.00655
EDGE-ADDITION/DELETION	0.00535
GRAPH-MODIFICATION-APPROACH	0.00532
GRAPH-DEGENERACY	0.00426
CORE-NUMBER-SEQUENCE	0.00426
LARGE-DATASET	0.00352
REAL-WORLD-DATASETS	0.00316
EDGE-MEASURES	0.00166
GRAPH-MINING	0.00132
AUXILIARY-INFORMATION	0.000768
Module 11	PageRank Score
WEIGHTED-MAXIMUM-COMMON-SUBGRAPH-(WMCS)	0.00685
COMPLETE-GRAPH	0.00670
DISTRIBUTED-ENVIRONMENT	0.00670
DISTRIBUTED-STORAGE	0.00670
SUBGRAPH-SIMILARITY-DETECTION	0.00439
SET-VALUED-DATA	0.00439
Module 12	PageRank Score
MARKOV-CHAIN-MONTE-CARLO	0.00855
HIERARCHICAL-RANDOM-NETWORK	0.00855
MONTE-CARLO-METHODS	0.00855
FUZZY-SET-THEORY	0.00855
Module 13	PageRank Score

SUPERVISED-MACHINE-LEARNING-ALGORITHMS	0.00616
ADVERSARIAL-MACHINE-LEARNING	0.00568
SOCIAL-RELATIONSHIPS	0.00568
MACHINE-LEARNING	0.00568
ADAPTIVE-RANDOM-WALK	0.00390
INTERMEDIATE-NODE	0.00390
Module 14	PageRank Score
NOISE-NODE	0.00644
L-DIVERSITY	0.00579
ALPHA-ANONYMIZATION	0.00543
SENSITIVE-ATTRIBUTES	0.00453
LOSSY-JOIN	0.00328
RECURSIVE-(C,L)-DIVERSITY	0.00268
EIGENVECTOR-CENTRALITY	0.00181
Module 15	PageRank Score
LEVEL-CUT-HEURISTIC-BASED-CLUSTERING-ALGORITHM	0.00604
K-DEGREE-CLOSENESS-ANONYMITY	0.00604
CENTRALITY-MEASURES	0.00604
K-DEGREE	0.00478
PASSIVE-ATTACK	0.00166
MEASUREMENT	0.00124
Module 16	PageRank Score
RANDOM-NETWORK	0.00800
BOOTSTRAP-PERCOLATION	0.00570
GRAPH-MATCHING-TECHNIQUE	0.00570
DE-ANONYMIZATION	0.00515
Module 17	PageRank Score
INFERENCE-ALGORITHM	0.00556
COLLECTIVE-CLASSIFICATION	0.00370
EFFICIENT-FRONTIER	0.00370
SPATIO-TEMPORAL-FEATURE	0.00360
SENSITIVE-EDGES	0.00305
Module 18	PageRank Score
ANONYMIZATION-PROCESS-RESTART-ISSUE-(APRI)	0.00572
ACTIVATED-FUNCTION	0.00572
INCREMENTAL-DATA-PUBLISHING	0.00572
Module 19	PageRank Score
COLLABORATIVE-NETWORK	0.00496
COMPRESSIVE-SENSING	0.00458
RELATIONSHIP-MATRIX	0.00458
CHARACTERISTIC-VECTOR	0.00277
Module 20	PageRank Score

SHORTEST-PATH	0.00542
(K1,K2)-SHORTEST-PATH	0.00382
K-SHORTEST-PATH	0.00382
PRIVACY-PRESERVING-DATA-MINING-(PPDM)	0.00255
Module 21	PageRank Score
GENERALIZATION-APPROACH	0.00401
UNCERTAIN-GRAPHS	0.00361
MAXIMIZING-VARIANCE	0.00270
NODE-DEGREE	0.00236
ATTRIBUTE-GRAPH	0.000592
LOCATION-PREDICTION	0.000575
Module 22	PageRank Score
GRAPH-OPERATIONS	0.00450
GRAPH-CONTRACTION	0.00450
NP-HARD	0.00396
Module 23	PageRank Score
DIRECTED-GRAPH	0.00462
INFLUENCE-MAXIMIZATION	0.00387
SOCIAL-INFLUENCE	0.00387
Module 24	PageRank Score
DIFFERENTIAL-PRIVACY	0.00607
TOPOLOGICAL-INFORMATION	0.00295
PERSISTENT-HOMOLOGY	0.00241
Module 25	PageRank Score
COMMUNITY-DETECTION-ALGORITHMS	0.00393
COMMUNITY-STRUCTURE	0.00314
IDENTITY-DISCLOSURE	0.00131
HETEROGENEOUS-NETWORK	0.00113
K-SHELLS	0.000827
EQUI-CARDINAL-CLUSTERING-(ECC)	0.000711
Module 26	PageRank Score
GRAPH-PARTITIONING	0.00372
VERTEX-CONNECTIVITY	0.00291
TOPOLOGICAL-STRUCTURE-SIMILARITY	0.00268
Module 27	PageRank Score
RANDOM-MATRIX	0.00388
MATRIX-ALGEBRA	0.00388
Module 28	PageRank Score
LINKING-ATTRIBUTE-TABLE	0.00375
SENSITIVE-LABELS	0.00375
Module 29	PageRank Score
DECISION-SUPPORT-SYSTEMS-(DSS)	0.00325
HYBRID-ALGORITHMS	0.00230
SEQUENTIAL-RELEASES	0.00151

Module 30	PageRank Score
SUBGRAPH	0.00334
HEALTH-INFORMATION	0.00334
Module 31	PageRank Score
PAGERANK-ALGORITHM	0.00311
ROUGH-SET-THEORY	0.00311
Module 32	PageRank Score
IMPRECISION-BOUND	0.00310
SLICING	0.00310
Module 33	PageRank Score
AUTOMATED-GROUPING	0.00300
SENSITIVE-SENTIMENTS	0.00300
Module 34	PageRank Score
ACTIVE-ATTACKS	0.00297
ANTIDIMENSION	0.00297
Module 35	PageRank Score
K-OUT-ANONYMITY	0.00291
IMPORTANT-NODES	0.00291
Module 36	PageRank Score
SUPPRESSION	0.00287
K-MEANS	0.00287
Module 37	PageRank Score
K-NMF	0.00279
MUTUAL-FRIEND-ATTACK	0.00279
Module 38	PageRank Score
CONFIDENTIALITY	0.00276
SYNTHETIC-GRAPH-GENERATION	0.00276
Module 39	PageRank Score
NETWORK-COHESION	0.00264
RECOMMENDER-SYSTEMS	0.00264

Subperiod 2019-2022	
Module 1	PageRank Score
PRIVACY-PRESERVATION	0.0152
SOCIAL-NETWORK	0.0137
ANONYMIZATION	0.0109
STRUCTURAL-PROPERTIES	0.00976
DATA-MINING	0.00770
DIFFERENTIAL-PRIVACY	0.00719
DATA-PUBLISHING	0.00719
GRAPH-MODIFICATION-APPROACH	0.00714
REAL-WORLD-DATASETS	0.00686
UTILITY	0.00670
GRAPH-THEORY	0.00648
INFORMATION-LOSS	0.00637
PERTURBATION-TECHNIQUES	0.00623
K-ANONYMITY	0.00616
CLUSTERING-ALGORITHMS	0.00608
PRIVACY-ATTACK-MODEL	0.00539
TOPOLOGICAL-INFORMATION	0.00467
GRAPH-MINING	0.00458
GENERALIZATION-APPROACH	0.00436
DEGREE-SEQUENCE	0.00391
MICROAGGREGATION	0.00352
RE-IDENTIFICATION-ATTACKS	0.00302
DK-GRAPH	0.00293
MEASUREMENT	0.00135
KRONECKER-GRAPHS	0.00106
PERSISTENT-HOMOLOGY	0.000963
COMMUNITY-PRIVACY	0.000624
SHORTEST-PATH	0.000601
CENTROID-SELECTION	0.000479
ALL-DISTANCE-SKETCH	0.000309
EDGE-WEIGHT-ANONYMIZATION	0.0000556
Module 2	PageRank Score
STRUCTURAL-ATTACKS	0.0108
GRAPH-QUERIES	0.0108
MATRIX-DECOMPOSITION	0.0108
SET-VALUED-DATA	0.0108
ADVERSARIAL-MACHINE-LEARNING	0.0108
SINGULAR-VALUE-DECOMPOSITION-(SVD)	0.00993
DE-ANONYMIZATION	0.00847
GRAPH-ISOMORPHISM	0.00798
DISTINGUISHABILITY-PROBABILITY	0.00478
SPLIT-ALGORITHMS	0.00478

INFERENCE-ATTACK	0.00450
Module 3	PageRank Score
HIGH-DEGREE-NODES	0.00871
PREDICTIVE-MODELS	0.00871
NEIGHBORHOOD-INFORMATION	0.00871
OPTIMIZATION	0.00864
ARTIFICIAL-NEURAL-NETWORK-(ANN)	0.00708
FIREFLY-ALGORITHM-(FA)	0.00626
FUZZY-CLUSTERING	0.00626
IDENTITY-DISCLOSURE	0.00626
GRAPH-NEURAL-NETWORK-(GNN)	0.00596
Module 4	PageRank Score
CRYPTOGRAPHY	0.00780
HOMOMORPHIC-ENCRYPTION	0.00730
CLOUD-COMPUTING	0.00692
BIG-DATA	0.00655
MARKOV-CLUSTERING-(MCL)	0.00615
CLUSTERING-ACCURACY	0.00615
GRAPH-OPERATIONS	0.00544
SERVICES	0.00538
AUTHENTICATION	0.00356
Module 5	PageRank Score
GENERATIVE-ADVERSARIAL-NETWORK-(GAN)	0.00921
FEATURE-LEARNING	0.00921
GRAPH-DATA	0.00921
ADAPTIVE-RANDOM-WALK	0.00921
MACHINE-LEARNING	0.00797
MATRIX-ALGEBRA	0.00666
Module 6	PageRank Score
INTERNET-OF-THINGS-(IOT)	0.00701
AUXILIARY-INFORMATION	0.00609
PRIVACY-BREACH	0.00560
(ALPHA,-L)-DIVERSITY	0.00539
CLUSTERING-FEATURE-(CF)-TREE	0.00539
PARTITIONING-APPROACH	0.00520
POWER-LAW	0.00487
GRAPH-PARTITIONING	0.00485
FREQUENT-PATTERN-MINING	0.00370
REGULARITY-LEMMA	0.00192
GRAPHLETS	0.00134
Module 7	PageRank Score
STRUCTURED-DATA	0.00670
SEQUENTIAL-CLUSTERING	0.00577
ASSORTATIVITY	0.00577

ARTIFICIAL-INTELLIGENCE-(AI)	0.00538
ANATOMY	0.00416
NODE-DEGREE	0.00389
VARIATIONAL-GRAPH-AUTOENCODERS-(VGA)	0.00374
GRAPH-RECOVERY-ATTACK	0.00374
K-DEGREE	0.00310
ONE-TIME-SCAN	0.00233
HIERARCHICAL-CLUSTERING	0.00217
Module 8	PageRank Score
COLLUSION	0.00887
EMERGENCY-RESCUE	0.00887
GAME-THEORY	0.00887
FOUNTAIN-CODE-(FC)	0.00887
DISTRIBUTED-STORAGE	0.00887
Module 9	PageRank Score
FACEBOOK	0.00775
DUNBAR'S-NUMBER	0.00586
GENERAL-DATA-PROTECTION-REGULATION-(GDPR)	0.00586
SOCIAL-NETWORK-ANALYSIS-(SNA)	0.00586
SYNTHETIC-GRAPH-GENERATION	0.00586
CORRELATION-MATRIX	0.00391
Module 10	PageRank Score
NEURO-FUZZY	0.00794
FUZZY-SET-THEORY	0.00794
MIDDLEWARE-SERVER	0.00733
EMOTIONAL-DETECTION	0.00733
REWIRING	0.00381
Module 11	PageRank Score
CLUSTER-ANALYSIS	0.00674
CONNECTION-FINGERPRINT-ATTACK	0.00630
EQUIVALENCE-CLASSES	0.00630
PERSONALIZATION	0.00630
L-DIVERSITY	0.00503
T-CLOSENESS	0.00141
Module 12	PageRank Score
GRAPH-MATCHING-TECHNIQUE	0.00589
(K,T)-PRIVACY	0.00578
LABEL-GENERALIZATION	0.00578
K-AUTOMORPHISM	0.00578
1-NEIGHBORHOOD-ATTACK	0.00271
JENSEN-SHANNON-DIVERGENCE	0.00189
Module 13	PageRank Score
COMMUNITY-DETECTION-ALGORITHMS	0.00755

BACKGROUND-KNOWLEDGE	0.00495
NEIGHBORHOOD-ATTACK	0.00367
CONFIDENTIALITY	0.00282
HEALTH-INFORMATION	0.00255
COMMUNITY-STRUCTURE	0.00235
INFLUENCE-MATRIX	0.00185
Module 14	PageRank Score
CORRELATION-ATTACK	0.00638
CALL-DETAIL-RECORDS	0.00638
BLOWFISH-PRIVACY	0.00638
MUTUAL-FRIEND-ATTACK	0.00402
Module 15	PageRank Score
CLOUD-BASED-ONLINE-SOCIAL-NETWORKS-(COSN)	0.00564
ATTRIBUTE-BASED-ENCRYPTION-(ABE)	0.00564
PRIVACY-PRESERVING-DATA-MINING-(PPDM)	0.00564
DIRECTED-GRAPH	0.00492
Module 16	PageRank Score
DIFFUSION-PROCESS	0.00593
BACKPROPAGATION-ALGORITHM	0.00593
BLOGS	0.00593
SUPERVISED-MACHINE-LEARNING-ALGORITHMS	0.00369
Module 17	PageRank Score
LARGE-DATASET	0.00584
SOCIAL-RELATIONSHIPS	0.00584
HUBS	0.00399
LINK-PRIVACY	0.00399
Module 18	PageRank Score
RANDOM-PROJECTION-ALGORITHM	0.00496
RANDOM-MATRIX	0.00496
RANDOMIZATION-APPROACH	0.00449
RANDOM-PERTURBATION	0.00438
Module 19	PageRank Score
SENSITIVE-ATTRIBUTES	0.00524
STRUCTURE-ATTRIBUTE-GRAPH-(SAG)	0.00437
NATURAL-LANGUAGE-PROCESSING-SYSTEMS-(NLP)	0.00437
ATTRIBUTE-GRAPH	0.00346
Module 20	PageRank Score
COMBINATORIAL-OPTIMIZATION	0.00422
GRAPH-GENERATION-MODEL	0.00396
AVERAGE-SHORTEST-PATH-LENGTH-(APL)	0.00379

CLUSTER-COEFFICIENT	0.00286
CUCKOO-OPTIMIZATION-ALGORITHM-(COA)	0.00198
Module 21	PageRank Score
PERSONAL-GAZETTEER	0.00531
TRAJECTORY	0.00531
GLOBAL-POSITIONING-SYSTEM-(GPS)	0.00531
Module 22	PageRank Score
NEIGHBORHOOD-ATTRACTION-FIREFLY-ALGORITHM-(NAFA)	0.00479
NUMBER-FACTORIZATION	0.00479
F-FACTORS	0.00479
Module 23	PageRank Score
M-PRIVACY	0.00473
INSIDER-ATTACK	0.00473
COLLABORATIVE-NETWORK	0.00473
Module 24	PageRank Score
LINKAGE-ATTACK	0.00451
SYBIL-ATTACK	0.00451
BLOOM-FILTER	0.00451
Module 25	PageRank Score
NONDETERMINISTIC-ALGORITHMS	0.00401
RECOMMENDER-SYSTEMS	0.00401
UNDIRECTED-GRAPH	0.00382
Module 26	PageRank Score
EDGE-ADDITION/DELETION	0.00373
BLOCKCHAIN	0.00351
NOISE-ADDITION	0.00351
(K,L)-ANONYMITY	0.00109
Module 27	PageRank Score
PARTICLE-SWARM-OPTIMIZATION-ALGORITHM-(PSO)	0.00387
HYBRID-ALGORITHMS	0.00387
GENETIC-ALGORITHM-(GA)	0.00307
Module 28	PageRank Score
UNCERTAIN-GRAPHS	0.00325
EXISTENCE-PROBABILITY	0.00280
TRIADIC-CLOSURE	0.00116
NODE-CHARACTERISTICS	0.00106
Module 29	PageRank Score
GRAPHX	0.00309
REACHABILITY	0.00309
Module 30	PageRank Score
K-COUPLET-ANONYMITY	0.00297
ATTRIBUTE-COUPLET-ATTACK	0.00297

Module 31	PageRank Score
EQUI-CARDINAL-CLUSTERING-(ECC)	0.00285
TOPOLOGICAL-STRUCTURE-SIMILARITY	0.00285
Module 32	PageRank Score
BETWEENNESS-CENTRALITY	0.00265
NOISE-NODE	0.00265
Module 33	PageRank Score
TIME-SERIAL-DATA	0.00257
DYNAMIC-NETWORK	0.00257
Module 34	PageRank Score
SENSITIVE-WEIGHTED-EDGES	0.00234
EDGE-BETWEENNESS-CENTRALITY	0.00234