Shusaku Tsumoto

List of Publications by Year
in descending order

191	908	567281 15	580821 25
papers	citations	h-index	g-index

193	193	193	379
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Knowledge discovery in clinical databases and evaluation of discovered knowledge in outpatient clinic. Information Sciences, 2000, 124, 125-137.	6.9	105
2	Similarity-based behavior and process mining of medical practices. Future Generation Computer Systems, 2014, 33, 21-31.	7.5	47
3	Exploratory Univariate Analysis on the Characterization of a University Hospital: A Preliminary Step to Data-Mining-Based Hospital Management Using an Exploratory Univariate Analysis of a University Hospital. The Review of Socionetwork Strategies, 2010, 4, 47-63.	1.5	44
4	A â€Ubiquitous Environmentâ€•through Wireless Voice/Data Communication and a Fully Computerized Hospital Information System in a University Hospital. International Federation for Information Processing, 2010, , 160-168.	0.4	44
5	Correlation and Regression Analysis for Characterizations of a University Hospital. The Review of Socionetwork Strategies, 2011, 5, 43-55.	1.5	42
6	Detection of risk factors using trajectory mining. Journal of Intelligent Information Systems, 2011, 36, 403-425.	3.9	39
7	Risk Mining in Medicine: Application of Data Mining to Medical Risk Management. Fundamenta Informaticae, 2010, 98, 107-121.	0.4	33
8	Abstract Intelligence. International Journal of Cognitive Informatics and Natural Intelligence, 2017, 11, 1-15.	0.4	27
9	Contingency matrix theory: Statistical dependence in a contingency table. Information Sciences, 2009, 179, 1615-1627.	6.9	25
10	Perspectives on Cognitive Computers and Knowledge Processors. International Journal of Cognitive Informatics and Natural Intelligence, 2013, 7, 1-24.	0.4	25
11	Cluster Analysis of Time-Series Medical Data Based on the Trajectory Representation and Multiscale Comparison Techniques. IEEE International Conference on Data Mining, 2006, , .	0.0	20
12	MULTISCALE COMPARISON AND CLUSTERING OF THREE-DIMENSIONAL TRAJECTORIES BASED ON CURVATURE MAXIMA. International Journal of Information Technology and Decision Making, 2010, 09, 889-904.	3.9	20
13	Clustering-based analysis in hospital information systems. , 2011, , .		20
14	Perspectives on eBrain and Cognitive Computing. International Journal of Cognitive Informatics and Natural Intelligence, 2012, 6, 1-21.	0.4	19
15	Statistical Independence and Determinants in a Contingency Table â€“ Interpretation of Pearson Residuals based on Linear Algebra â€“. Fundamenta Informaticae, 2009, 90, 251-267.	0.4	17
16	Contingency Matrix Theory II: Degree of Dependence as Granularity. Fundamenta Informaticae, 2009, 90, 427-442.	0.4	16
17	Healthy diet assessment mechanism based on fuzzy markup language for Japanese food. Soft Computing, 2016, 20, 359-376.	3.6	15
18	Maintenance and Discovery of Domain Knowledge for Nursing Care using Data in Hospital Information System. Fundamenta Informaticae, 2015, 137, 237-252.	0.4	14

#	Article	IF	Citations
19	Towards Data-Oriented Hospital Services: Data Mining-Based Hospital Management. , 2010, , .		11
20	Trend detection from large text data. , 2010, , .		11
21	Information reuse in hospital information systems: A data mining approach. , 2011, , .		11
22	Construction of Clinical Pathway Using Dual Clustering. Neuroscience and Biomedical Engineering, 2015, 3, 49-56.	0.4	10
23	Prospective clinical trial evaluating vulnerability and chemotherapy risk using geriatric assessment tools in older patients with lung cancer. Geriatrics and Gerontology International, 2019, 19, 1108-1111.	1.5	10
24	Automated discovery of chronological patterns in long time-series medical datasets. International Journal of Intelligent Systems, 2005, 20, 737-757.	5.7	9
25	Data mining in hospital information system for hospital management. , 2009, , .		9
26	Construction of Clinical Pathway based on Similarity-based Mining in Hospital Information System. Procedia Computer Science, 2014, 31, 1107-1115.	2.0	9
27	Identifying Exacerbating Cases in Chronic Diseases Based on the Cluster Analysis of Trajectory Data on Laboratory Examinations. , 2007, , .		8
28	Estimation of Service Quality of a Hospital Information System Using a Service Log. The Review of Socionetwork Strategies, 2014, 8, 53-68.	1.5	8
29	Real-World Preventive Effects of Suvorexant in Intensive Care Delirium. Journal of Clinical Psychiatry, 2020, 81, .	2.2	8
30	Chance discovery in medicine â€" Detection of rare risky events in chronic diseases â€". New Generation Computing, 2003, 21, 135-147.	3.3	7
31	Information Granules of Statistical Dependence in Multiway Contingency Tables. , 2010, , .		7
32	Text Categorization with Considering Temporal Patterns of Term Usages. , 2010, , .		7
33	Characterizing Hospital Services Using Temporal Data Mining. , 2012, , .		7
34	Construction of clinical pathway from histories of clinical actions in hospital information system. , 2016, , .		7
35	Dependency and Granularity in DataData mining granularity -MiningData mining dependency. , 2009, , 1864-1872.		7
36	Rough Sets and Medical Differential Diagnosis. Intelligent Systems Reference Library, 2013, , 605-621.	1.2	7

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37	Geometrical and Combinatorial Nature of Pearson Residuals. , 2010, , .		6
38	Automated Empirical Selection of Rule Induction Methods Based on Recursive Iteration of Resampling Methods and Multiple Testing. , 2010, , .		6
39	Special issue on data mining for decision making and risk management. Journal of Intelligent Information Systems, 2011, 36, 249-251.	3.9	6
40	FML-based Japanese diet assessment system. , 2013, , .		6
41	Rough Sets : Past, Present and Future. Journal of Japan Society for Fuzzy Theory and Systems, 2001, 13, 552-561.	0.0	5
42	Mining Risk Information in Hospital Information Systems as Risk Mining. , 2007, , .		5
43	Partial statistical independence in contingency matrix. , 2008, , .		5
44	A new framework for incremental rule induction based on rough sets. , 2011, , .		5
45	Combinatorics in Pearson residuals. International Journal of Knowledge Engineering and Soft Data Paradigms, 2013, 4, 72.	0.0	5
46	A proposal of a privacy-preserving questionnaire by non-deterministic information and its analysis. , 2016, , .		5
47	Estimation of Disease Code from Electronic Patient Records. , 2019, , .		5
48	On Learning Decision Rules From Flow Graphs. , 2007, , .		4
49	Combinatorics of pearson residuals and degree of freedom in contingency tables. , 2011, , .		4
50	Healthcare IT: Integration of consumer healthcare data and electronic medical records for chronic disease management. , 2014, , .		4
51	Mining Clinical Process from Hospital Information System: A Granular Computing Approach. Fundamenta Informaticae, 2021, 182, 181-218.	0.4	4
52	Proposal of Medical KDD Support User Interface Utilizing Rule Interestingness Measures. , 2006, , .		3
53	Statistical Independence and Contingency Matrix. , 2008, , .		3
54	Detection of trends of technical phrases in text mining. , 2009, , .		3

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55	Sampling from databases for rule induction methods based on likelihood ratio test. , 2010, , .		3
56	Multidimensional temporal mining in clinical data. , 2012, , .		3
57	Detection of research trends from bibliographical data. International Journal of Data Mining, Modelling and Management, 2012, 4, 255.	0.1	3
58	Special issue on challenges in knowledge discovery and data mining. Journal of Intelligent Information Systems, 2013, 41, 1-4.	3.9	3
59	Mining nursing care plan from data extracted from hospital information system. , 2013, , .		3
60	Combinatorics of Information Granule in Contingency Table. International Journal of Intelligent Systems, 2013, 28, 892-906.	5.7	3
61	Cognitive Computing. International Journal of Software Science and Computational Intelligence, 2018, 10, 1-14.	3.0	3
62	Clinical Pathway Generation from Hospital Information System. Procedia Computer Science, 2018, 139, 545-553.	2.0	3
63	An approach to exploring associations between hospital structural measures and patient satisfaction by distanceâ€based analysis. BMC Health Services Research, 2021, 21, 63.	2.2	3
64	Medical Diagnosis: Rough Set View. Studies in Computational Intelligence, 2017, , 139-156.	0.9	3
65	On the Nature of Degree of Indiscerniblity for Rough Clustering. , 2006, , .		2
66	Risk Mining in Hospital Information Systems. , 2006, , .		2
67	Evaluating Learning Algorithms Composed by a Constructive Meta-Learning Scheme for a Rule Evaluation Support Method. , 2006, , .		2
68	Role of Marginal Distribution in a Contingency Table. , 2006, , .		2
69	Hospital Management Based on Data Mining. , 2008, , .		2
70	Data-Oriented Construction and Maintenance of Clinical Pathway Using Similarity-Based Data Mining Methods. , 2012, , .		2
71	Degree of freedom and numbers of subdeterminants in contingency table. , 2012, , .		2
72	Mining hierarchical temporal association rules in a publication database. , 2013, , .		2

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73	Formal analysis of leave-one out method based on decremental sampling scheme. , 2014, , .		2
74	Factors of Patient Satisfaction Based on Distant Analysis in HCAHPS Databases. , 2014, , .		2
75	Visualizing dynamics of patients in hospitals using devise locations. , 2014, , .		2
76	Formal analysis of cross-validation for rule induction using probabilistic indices. , 2014, , .		2
77	Mining Schedule of Nursing Care Based on Dual-Clustering. Procedia Computer Science, 2015, 55, 1203-1212.	2.0	2
78	Data Mining Oriented Software Quality Estimation. Procedia Computer Science, 2016, 91, 1028-1037.	2.0	2
79	Construction of Discharge Summaries Classifier. , 2017, , .		2
80	From Hospital Big Data to Clinical Process: A Granular Computing Approach. , 2018, , .		2
81	Mining Clinical Pathways Using Dual Clustering. The Review of Socionetwork Strategies, 2021, 15, 287-307.	1.5	2
82	Order Trajectory Analysis for Monitoring Clinical Process. The Review of Socionetwork Strategies, 2022, 16, 53-70.	1.5	2
83	Expectationâ€“Maximization (EM) Clustering as a Preprocessing Method for Clinical Pathway Mining. The Review of Socionetwork Strategies, 2022, 16, 25-52.	1.5	2
84	Automated Knowledge Discovery In Clinical Databases Based On Rough Set Model. Infor, 2000, 38, 196-207.	0.6	1
85	Charcteristics of Pearson Residuals in a Contingency Matrix. , 2007, , .		1
86	Contingency Table and Granularity. , 2007, , .		1
87	Evaluating Learning Algorithms to Construct Rule Evaluation Models Based on Objective Rule Evaluation Indices. , 2007, , .		1
88	Mining Diagnostic Taxonomy and Diagnostic Rules for Multi-Stage Medical Diagnosis from Hospital Clinical Data. , 2007, , .		1
89	Fuzziness from attribute generalization in information table. , 2008, , .		1
90	Evaluating a method to detect temporal trends of phrases in research documents. , 2009, , .		1

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91	Detecting Similarity of Transferring Datasets Based on Features of Classification Rules. , 2009, , .		1
92	Multidimensional trajectory mining and its application to medicine. , 2009, , .		1
93	Towards data-oriented hospital services: Data mining in hospital information systems. , 2011, , .		1
94	Rule induction methods with hierachical sampling. , 2011, , .		1
95	Towards Data-Oriented Hospital Services: Data Mining in Hospital Management. , 2011, , .		1
96	Temporal data mining in history data of hospital information systems. , 2011, , .		1
97	Information granules in medical differential diagnosis. , 2012, , .		1
98	Temporal Data Mining for Nursing Schedule Management. , 2012, , .		1
99	Clustering of non-metric proximity data based on bi-links with Ïµ-indiscernibility. Journal of Intelligent Information Systems, 2013, 41, 61-71.	3.9	1
100	Mining Clinical Pathway Using Clustering and Rule Induction. , 2013, , .		1
101	Clinical Schedule Management Using Similarity-Based Mining Methods. , 2013, , .		1
102	Granularity-based temporal data mining in hospital information system. , 2013, , .		1
103	Frequent Temporal Pattern Mining for Medical Data Based on Ranged Relations. , 2017, , .		1
104	Clinical Pathway Generation Based on Hierarchical Clustering and EM Clustering. , 2018, , .		1
105	Construction of Clinical Pathway Generation from Nursing Records and Discharge Summaries. , 2018, , .		1
106	Mining frequent temporal patterns from medical data based on fuzzy ranged relations. , 2019, , .		1
107	Determination of Disease from Discharge Summaries. The Review of Socionetwork Strategies, 2021, 15, 49-66.	1.5	1
108	Mining Diagnostic Taxonomy and Diagnostic Rules for Multi-Stage Medical Diagnosis from Hospital Clinical Data. , 2007, , .		1

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109	Formalization of Medical Diagnostic Rules. Lecture Notes in Computer Science, 2015, , 24-35.	1.3	1
110	Meaning of Marginal Distributions in a Contingency Table. , 2006, , .		0
111	Risk Mining in Hospital Information Systems. , 2006, , .		0
112	Residual Matrix and Statistical Independence in a Contingency Table. , 2006, , .		0
113	Data Structure and Algorithm in Data Mining: Granular Computing View. , 2006, , .		0
114	Grouping Similar Trajectories in Hospital Laboratory Data. , 2007, , .		0
115	Evaluating learning algorithms for a rule evaluation support method. , 2007, , .		0
116	Evaluating Learning Costs to Predict Human Interests with Rule Evaluation Models based on Objective Indices. , 2007, , .		0
117	Contingency matrix theory. , 2007, , .		0
118	Hierarchical clustering of asymmetric proximity data based on the indiscernibility-level. , 2008, , .		0
119	Statistical independence in three-variables contingency cube. , 2008, , .		0
120	Decomposition of pearson residuals of three-variables contingency cube. , 2008, , .		0
121	Trajectory mining using multiscale matching and clustering. , 2008, , .		0
122	Statistical dependence in contingency data cube. Conference Proceedings IEEE International Conference on Systems, Man, and Cybernetics, 2008, , .	0.0	0
123	Statistical independence of three variables and contingency matrix. , 2008, , .		0
124	Pearson residuals in multi-way contingency tables. , 2009, , .		0
125	Statistical independence of multivariate contingency tables. , 2009, , .		0
126	Distribution of derminants of contingency tables. , 2009, , .		0

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127	Detecting temporal patterns of technical phrases by using importance indices in a research documents. , 2009, , .		0
128	Preface: Cognitive Informatics, Cognitive Computing, and Their Denotational Mathematical Foundations (II). Fundamenta Informaticae, 2009, 90, i-vii.	0.4	0
129	Multivariate statistical independence and contingency tables. , 2009, , .		0
130	Three dimensional trajectories mining. , 2010, , .		0
131	Hierarchical, Granular Representation of Non-metric Proximity Data. , 2010, , .		0
132	Incremental discovery of probabilistic rules from clinical databases based on rough set theory. , 2010, , .		0
133	Comparing order entry subsequences related to CPOE correction factors. , 2010, , .		0
134	Curvature Maxima-based Trajectories Mining. , 2010, , .		0
135	An analysis of order correction factors by using a term extraction method for order entry sequences. , 2010, , .		0
136	A clustering method for asymmetric proximity data based on bi-links with ε-indiscernibility. , 2011, , .		0
137	Constructing features for document classification by using temporal patterns of term usages. , 2011, , .		0
138	Visualization of Hospital Services Using Data Mining Methods. , 2011, , .		0
139	Residual as Linear Sum of Matrix Determinants in Multiway Contingency Tables. International Journal of Computational Intelligence Systems, 2011, 4, 1080-1089.	2.7	0
140	Visualization of hospital services. , 2012, , .		0
141	Exploratory temporal data mining process in hospital information systems. , 2012, , .		0
142	Data-oriented maintenance of clinical pathway using clustering and multidimensional scaling. , 2012, , .		0
143	Temporal data mining of order entry histories for characterization of medical practice. , 2012, , .		0
144	Geometrical interpretation of pearson residuals. , 2012, , .		0

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145	Trajectories mining in hospital information systems. , 2012, , .		0
146	Visualization of doctors' behavior using similarity-based methods. , 2012, , .		0
147	Comparing similarity of concepts identified by temporal patterns of terms in biomedical research documents. , 2012, , .		0
148	Incremental induction of medical diagnostic rules. , 2013, , .		0
149	Incremental Induction of Probabilistic Rules Based on Incremental Sampling Scheme. , 2013, , .		0
150	Algebraic analysis of statistical dependence. , 2013, , .		0
151	Maintenance of nursing care plan using similarity-based data mining methods. , 2013, , .		0
152	Clinical schedule management based on granularity-based mining. , 2013, , .		0
153	Wireless LAN systems as a component of the communication infrastructure of a hospital: Insuring availability and security. , 2013, , .		0
154	Mining Clinical Pathway Candidates from Order History Based on the Clustering of Order Sequences. , 2013, , .		0
155	Evaluation of set-based indices based on incremental sampling framework. , 2013, , .		0
156	Cluster analysis of treatment processes based on the typicalness measure for building clinical pathways. , 2013, , .		0
157	Data mining based clinical care plan construction. , 2013, , .		0
158	Granularity-based mining for construction of nursing care plan. , 2013, , .		0
159	Data Mining-Based Service Quality Estimation in Hospital Information System. , 2014, , .		0
160	Formal analysis of cross-validation based on decremental sampling scheme. , 2014, , .		0
161	Probabilistic rule induction based on incremental sampling scheme. , 2014, , .		0
162	Homological analysis of statistical dependence. , 2014, , .		0

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163	Towards Data-Oriented Schedule Management in Hospital. , 2014, , .		0
164	Incremental rule induction based on updates of statistical indices. , 2014, , .		0
165	Formal Analysis of Statistical Dependence Based Homological Algebra. , 2014, , .		0
166	Data decomposition and dual clustering for clinical care management. , 2015, , .		0
167	The Change of the Structure of Patient Satisfaction by Waiting Time, Length of Stay and Hospital Rebuilding in Japan. , 2015, , .		0
168	Granular formalization of medical diagnostic process. , 2015, , .		0
169	Rule Mining Based on Nonmonotonic Rule Layers and Its Application to Medicine. , 2015, , .		0
170	Mining probabilistic rules using nonmonotonic rule layers. , 2015, , .		0
171	Quantitative Estimation of Software Quality in Hospital Information System. Neuroscience and Biomedical Engineering, 2016, 4, 57-66.	0.4	0
172	Mining process for improvement of clinical process quality. , 2016, , .		0
173	Active mining process for software quality estimation. , 2016, , .		0
174	Dual Clustering for Clinical Care Construction. , 2016, , .		0
175	Incremental Updates of Rough Set-Based Probabilistic Rules. , 2016, , .		0
176	Construction of linguistic variables from data and domain knowledge. , 2016, , .		0
177	Construction of linguistic variables based on rule induction and concept hierarchy. , 2016, , .		0
178	Statistical Estimation of Software Quality in Hospital Information System. , 2017, , 341-350.		0
179	Construction of discharge summaries classifier. , 2017, , .		0
180	Towards knowledge discovery from heterogeneous time-series medical databases. , 2017, , .		0

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181	Empirical Comparison of Distances forÂAgglomerative Hierarchical Clustering. Communications in Computer and Information Science, 2018, , 538-548.	0.5	0
182	Clinical Pathway Generation from Order Histories and Discharge Summaries. , 2019, , .		0
183	Studies Support the Use of Suvorexant for the Prevention of Delirium. Journal of Clinical Psychiatry, 2021, 82, .	2.2	0
184	Data-Oriented Maintenance of Schedule Management of Nursing Care. , 2014, , 169-177.		0
185	Incremental Rules Induction based on Rule Layers and its Application to Clinical Datasets. Neuroscience and Biomedical Engineering, 2017, 5, .	0.4	0
186	Automated Dual Clustering for Clinical Pathway Mining*. , 2020, , .		0
187	Order Trajectory Analysis in Hospital Information System*. , 2020, , .		0
188	Abstract Intelligence. , 2020, , 52-69.		0
189	Cognitive Computing. , 2020, , 37-51.		0
190	Comparison of Clustering Strategies using a Partition Tree. , 2021, , .		0
191	Granular Computing based Comparison of Agglomerative Clustering. , 2021, , .		0