

ภาคผนวก ข

ข้อมูลการวิเคราะห์

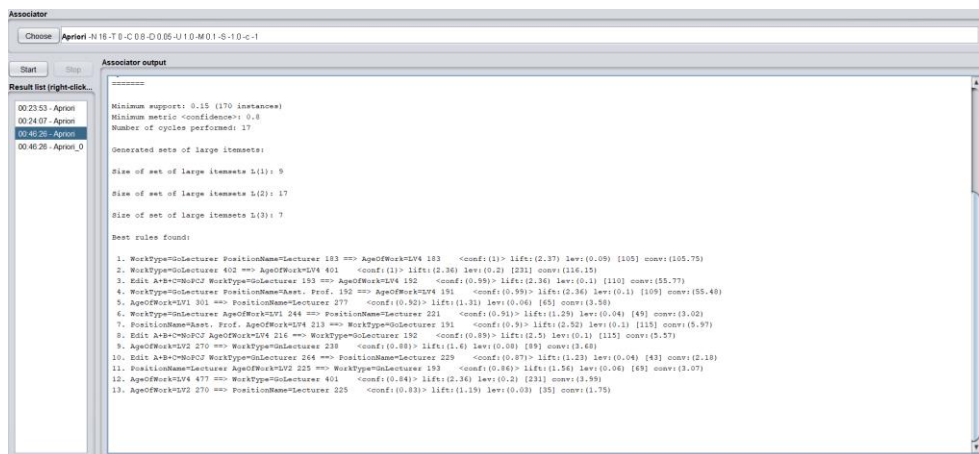
ภาคผนวก ข

ข้อมูลการวิเคราะห์

1.) กฎความสัมพันธ์ที่ได้ทำการวิเคราะห์

No.	Premises	Conclusion	Confiden... ↓	Support	LaPlace	Gain	p-s	Lift	Convict...
16	Lecturer, GoLecturer	LV4	1	0.162	1	-0.162	0.094	2.369	*
15	GoLecturer	LV4	0.998	0.355	0.999	-0.357	0.205	2.363	232.306
14	NoPCJ, GoLecturer	LV4	0.995	0.170	0.999	-0.172	0.098	2.357	111.530
13	GoLecturer, Asst. Prof.	LV4	0.995	0.169	0.999	-0.171	0.097	2.357	110.952
12	LV1	Lecturer	0.920	0.245	0.983	-0.288	0.058	1.310	3.729
11	GnLecturer, LV1	Lecturer	0.906	0.196	0.983	-0.236	0.044	1.289	3.154
10	LV4, Asst. Prof.	GoLecturer	0.897	0.169	0.984	-0.208	0.102	2.521	6.237
9	NoPCJ, LV4	GoLecturer	0.889	0.170	0.982	-0.212	0.102	2.499	5.798
8	LV2	GnLecturer	0.881	0.211	0.977	-0.267	0.079	1.601	3.793
7	GnLecturer, NoPCJ	Lecturer	0.867	0.203	0.975	-0.265	0.038	1.234	2.243
6	Lecturer, LV2	GnLecturer	0.858	0.171	0.976	-0.227	0.061	1.558	3.161
5	LV4	GoLecturer	0.841	0.355	0.953	-0.489	0.205	2.363	4.044
4	LV2	Lecturer	0.833	0.199	0.968	-0.279	0.031	1.186	1.784

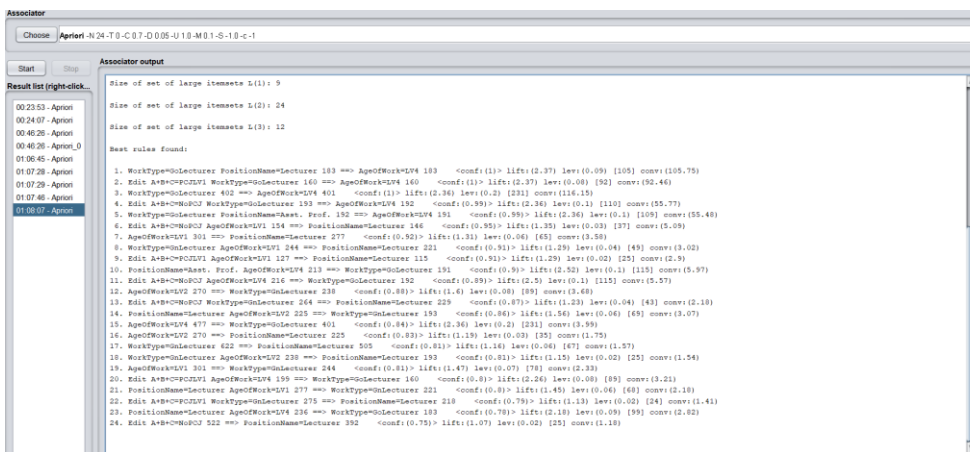
ภาพที่ ข.1 ภาพการวิเคราะห์ข้อมูล Project , Conference , Journal โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 80%



ภาพที่ ข.2 ภาพการวิเคราะห์ข้อมูล Project , Conference , Journal โดยใช้โปรแกรม Weka กำหนดค่า Confident 80%

No.	Premises	Conclusion	Support	Confiden... ↓	LaPlace	Gain	p-s	Lift	ConvictL...
21	GoLecturer	LV4	0.355	0.998	0.999	-0.357	0.205	2.363	232.306
20	NoPCJ, GoLecturer	LV4	0.170	0.995	0.999	-0.172	0.098	2.357	111.530
19	GoLecturer, Asst. Prof.	LV4	0.169	0.995	0.999	-0.171	0.097	2.357	110.952
18	LV1	Lecturer	0.245	0.920	0.983	-0.288	0.058	1.310	3.729
17	GnLecturer, LV1	Lecturer	0.196	0.906	0.983	-0.236	0.044	1.289	3.154
16	LV4, Asst. Prof.	GoLecturer	0.169	0.897	0.984	-0.208	0.102	2.521	6.237
15	NoPCJ, LV4	GoLecturer	0.170	0.889	0.982	-0.212	0.102	2.499	5.798
14	LV2	GnLecturer	0.211	0.881	0.977	-0.267	0.079	1.601	3.793
13	GnLecturer, NoPCJ	Lecturer	0.203	0.867	0.975	-0.265	0.038	1.234	2.243
12	Lecturer, LV2	GnLecturer	0.171	0.858	0.976	-0.227	0.061	1.558	3.161
11	LV4	GoLecturer	0.355	0.841	0.953	-0.489	0.205	2.363	4.044
10	LV2	Lecturer	0.199	0.833	0.968	-0.279	0.031	1.186	1.784
9	GnLecturer	Lecturer	0.447	0.812	0.933	-0.654	0.060	1.155	1.581
8	GnLecturer, LV2	Lecturer	0.171	0.811	0.967	-0.250	0.023	1.154	1.573
7	LV1	GnLecturer	0.216	0.811	0.960	-0.317	0.069	1.473	2.374
6	Lecturer, LV1	GnLecturer	0.196	0.798	0.960	-0.295	0.061	1.449	2.224
5	GnLecturer, PCJLV1	Lecturer	0.193	0.793	0.959	-0.294	0.022	1.128	1.435
4	Lecturer, LV4	GoLecturer	0.162	0.775	0.961	-0.256	0.088	2.180	2.869
3	NoPCJ	Lecturer	0.347	0.751	0.921	-0.577	0.022	1.069	1.194

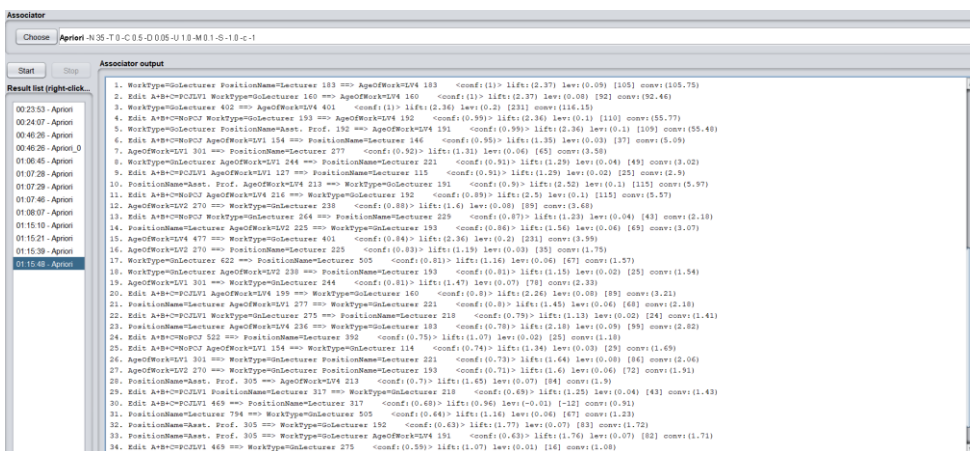
ภาพที่ ข.3 ภาพการวิเคราะห์ข้อมูล Project , Conference , Journal โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 70%



ภาพที่ ข.4 ภาพการวิเคราะห์ข้อมูล Project , Conference , Journal โดยใช้โปรแกรม Weka กำหนดค่า Confident 70%

No.	Premises	Conclusion	Confiden... ↓	Support	LaPlace	Gain	p-s	Lift	ConvictL...
31	Lecturer, GoLecturer	LV4	1	0.162	1	-0.162	0.094	2.369	=
30	GoLecturer	LV4	0.998	0.355	0.999	-0.357	0.205	2.363	232.306
29	NoPCJ, GoLecturer	LV4	0.995	0.170	0.999	-0.172	0.098	2.357	111.530
28	GoLecturer, Asst. Prof.	LV4	0.995	0.169	0.999	-0.171	0.097	2.357	110.952
27	LV1	Lecturer	0.920	0.245	0.983	-0.288	0.058	1.310	3.729
26	GnLecturer, LV1	Lecturer	0.906	0.196	0.983	-0.236	0.044	1.289	3.154
25	LV4, Asst. Prof.	GoLecturer	0.897	0.169	0.984	-0.208	0.102	2.521	6.237
24	NoPCJ, LV4	GoLecturer	0.889	0.170	0.982	-0.212	0.102	2.499	5.798
23	LV2	GnLecturer	0.881	0.211	0.977	-0.267	0.079	1.601	3.793
22	GnLecturer, NoPCJ	Lecturer	0.867	0.203	0.975	-0.265	0.038	1.234	2.243
21	Lecturer, LV2	GnLecturer	0.858	0.171	0.976	-0.227	0.061	1.558	3.161
20	LV4	GoLecturer	0.841	0.355	0.953	-0.489	0.205	2.363	4.044
19	LV2	Lecturer	0.833	0.199	0.968	-0.279	0.031	1.186	1.784
18	GnLecturer	Lecturer	0.812	0.447	0.933	-0.654	0.060	1.155	1.581
17	GnLecturer, LV2	Lecturer	0.811	0.171	0.967	-0.250	0.023	1.154	1.573
16	LV1	GnLecturer	0.811	0.216	0.960	-0.317	0.069	1.473	2.374
15	Lecturer, LV1	GnLecturer	0.798	0.196	0.960	-0.295	0.061	1.449	2.224
14	GnLecturer, PCJLV1	Lecturer	0.793	0.193	0.959	-0.294	0.022	1.128	1.435
13	Lecturer, LV4	GoLecturer	0.775	0.162	0.961	-0.256	0.088	2.180	2.869
12	NoPCJ	Lecturer	0.751	0.347	0.921	-0.577	0.022	1.069	1.194
11	LV1	Lecturer, GnLecturer	0.734	0.196	0.944	-0.337	0.077	1.643	2.081
10	LV2	Lecturer, GnLecturer	0.715	0.171	0.945	-0.307	0.064	1.599	1.939
9	Asst. Prof.	LV4	0.698	0.188	0.936	-0.351	0.075	1.654	1.916
8	Lecturer, PCJLV1	GnLecturer	0.688	0.193	0.932	-0.368	0.039	1.249	1.439
7	PCJLV1	Lecturer	0.676	0.281	0.905	-0.550	-0.011	0.962	0.917
6	Lecturer	GnLecturer	0.636	0.447	0.850	-0.958	0.060	1.155	1.235
5	Asst. Prof.	GoLecturer	0.630	0.170	0.921	-0.370	0.074	1.770	1.739
4	Asst. Prof.	LV4, GoLecturer	0.626	0.169	0.921	-0.371	0.073	1.765	1.726
3	PCJLV1	GnLecturer	0.586	0.243	0.879	-0.587	0.015	1.065	1.087
2	Lecturer, NoPCJ	GnLecturer	0.584	0.203	0.893	-0.491	0.012	1.061	1.081

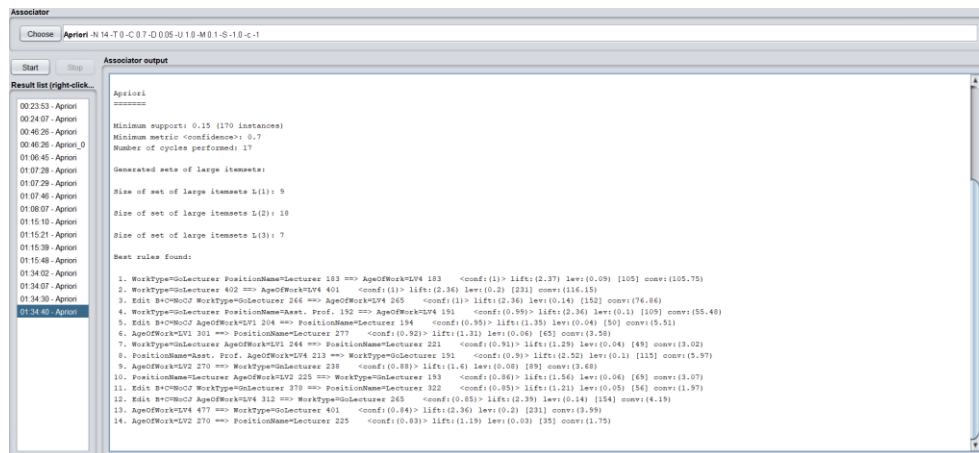
ภาพที่ ข.5 ภาพการวิเคราะห์ข้อมูล Project , Conference , Journal โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 50%



ภาพที่ ข.6 ภาพการวิเคราะห์ข้อมูล Project , Conference , Journal โดยใช้โปรแกรม Weka กำหนดค่า Confident 50%

No.	Premises	Conclusion	Support	Confiden... ↓	LaPlace	Gain	p-s	Lift	ConvictL...
17	Lecturer, GoLecturer	LV4	0.162	1	1	-0.162	0.094	2.369	*
16	GoLecturer	LV4	0.355	0.998	0.999	-0.357	0.205	2.363	232.306
15	NoCJ, GoLecturer	LV4	0.235	0.996	0.999	-0.236	0.135	2.360	153.715
14	GoLecturer, Asst. Prof.	LV4	0.169	0.995	0.999	-0.171	0.097	2.357	110.952
13	NoCJ, LV1	Lecturer	0.172	0.951	0.993	-0.189	0.045	1.353	6.066
12	LV1	Lecturer	0.245	0.920	0.983	-0.288	0.058	1.310	3.729
11	GnLecturer, LV1	Lecturer	0.196	0.906	0.983	-0.236	0.044	1.289	3.154
10	LV4, Asst. Prof.	GoLecturer	0.169	0.897	0.984	-0.208	0.102	2.521	6.237
9	LV2	GnLecturer	0.211	0.881	0.977	-0.267	0.079	1.601	3.793
8	Lecturer, LV2	GnLecturer	0.171	0.858	0.976	-0.227	0.061	1.558	3.161
7	NoCJ, GnLecturer	Lecturer	0.285	0.852	0.963	-0.384	0.050	1.212	2.007
6	NoCJ, LV4	GoLecturer	0.235	0.849	0.967	-0.318	0.136	2.388	4.277
5	LV4	GoLecturer	0.355	0.841	0.953	-0.489	0.205	2.363	4.044
4	LV2	Lecturer	0.199	0.833	0.968	-0.279	0.031	1.186	1.784

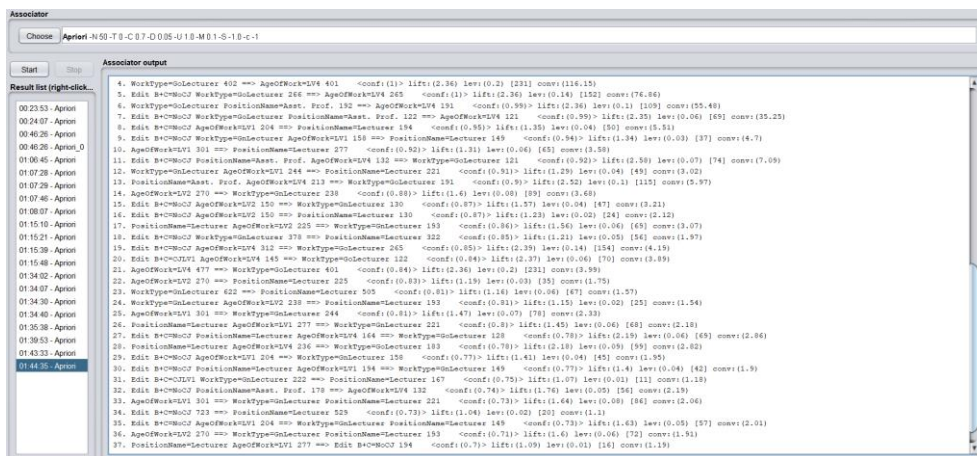
ภาพที่ ข.7 ภาพการวิเคราะห์ข้อมูล Conference , Journal โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 80%



ภาพที่ ข.8 ภาพการวิเคราะห์ข้อมูล Conference , Journal โดยใช้โปรแกรม Weka กำหนดค่า Confident 80%

No.	Premises	Conclusion	Support	Confiden... ↓	LaPlace	Gain	p-s	Lift	ConvictL...
21	GoLecturer, Asst Prof.	LV4	0.169	0.995	0.999	-0.171	0.097	2.357	110.952
20	NoCJ, LV1	Lecturer	0.172	0.951	0.993	-0.189	0.045	1.353	6.066
19	LV1	Lecturer	0.245	0.920	0.983	-0.288	0.058	1.310	3.729
18	GnLecturer, LV1	Lecturer	0.196	0.906	0.983	-0.236	0.044	1.289	3.154
17	LV4, Asst Prof.	GoLecturer	0.169	0.897	0.984	-0.208	0.102	2.521	6.237
16	LV2	GnLecturer	0.211	0.881	0.977	-0.267	0.079	1.601	3.793
15	Lecturer, LV2	GnLecturer, LV2	0.171	0.858	0.976	-0.227	0.061	1.558	3.161
14	NoCJ, GnLecturer	Lecturer	0.285	0.852	0.963	-0.384	0.050	1.212	2.007
13	NoCJ, LV4	GoLecturer	0.235	0.849	0.967	-0.318	0.136	2.388	4.277
12	LV4	GoLecturer	0.355	0.841	0.953	-0.489	0.205	2.363	4.044
11	LV2	Lecturer	0.199	0.833	0.968	-0.279	0.031	1.186	1.784
10	GnLecturer	Lecturer	0.447	0.812	0.933	-0.654	0.060	1.155	1.581
9	GnLecturer, LV2	Lecturer	0.171	0.811	0.967	-0.250	0.023	1.154	1.573
8	LV1	GnLecturer	0.216	0.811	0.960	-0.317	0.069	1.473	2.374
7	Lecturer, LV1	GnLecturer	0.196	0.798	0.960	-0.295	0.061	1.449	2.224
6	Lecturer, LV4	GoLecturer	0.162	0.775	0.961	-0.256	0.088	2.180	2.869
5	GnLecturer, CJLV1	Lecturer	0.148	0.752	0.959	-0.245	0.010	1.071	1.200
4	LV1	Lecturer, GnLecturer	0.196	0.734	0.944	-0.337	0.077	1.643	2.081
3	NoCJ	Lecturer	0.468	0.732	0.895	-0.812	0.019	1.041	1.108

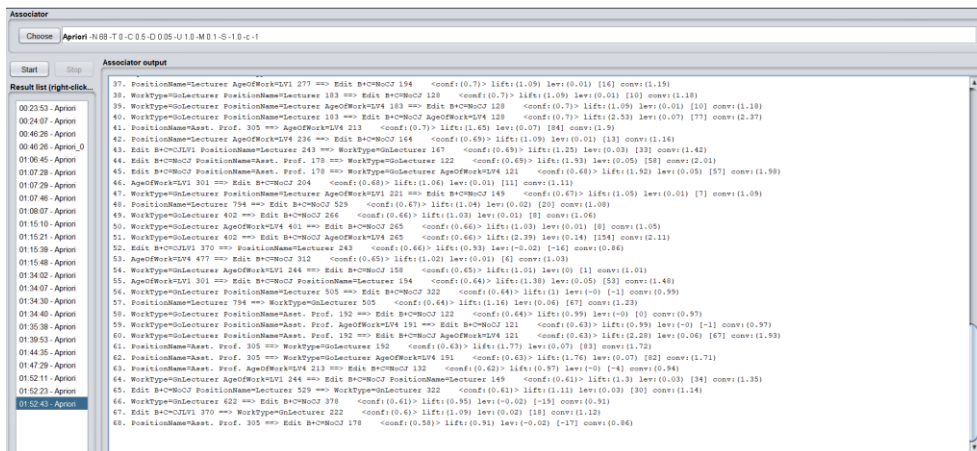
ภาพที่ ข.9 ภาพการวิเคราะห์ข้อมูล Conference , Journal โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 70%



ภาพที่ ข.10 ภาพการวิเคราะห์ข้อมูล Conference , Journal โดยใช้โปรแกรม Weka กำหนดค่า Confident 70%

No.	Premises	Conclusion	Confiden... ↓	Support	LaPlace	Gain	p-s	LIFT	ConvictL...
30	Lecturer, LV1	GnLecturer	0.798	0.196	0.960	-0.295	0.061	1.449	2.224
29	Lecturer, LV4	GoLecturer	0.775	0.162	0.961	-0.256	0.088	2.180	2.869
28	GnLecturer, CJLV1	Lecturer	0.752	0.148	0.959	-0.245	0.010	1.071	1.200
27	LV1	Lecturer, GnLecturer	0.734	0.196	0.944	-0.337	0.077	1.643	2.081
26	NoCJ	Lecturer	0.732	0.468	0.895	-0.812	0.019	1.041	1.108
25	LV2	Lecturer, GnLecturer	0.715	0.171	0.945	-0.307	0.064	1.599	1.939
24	Lecturer, LV1	NoCJ	0.700	0.172	0.941	-0.319	0.015	1.095	1.202
23	Asst Prof.	LV4	0.698	0.188	0.936	-0.351	0.075	1.654	1.916
22	Lecturer, LV4	NoCJ	0.695	0.145	0.947	-0.273	0.012	1.086	1.181
21	Lecturer, CJLV1	GnLecturer	0.687	0.148	0.945	-0.282	0.029	1.249	1.437
20	LV1	NoCJ	0.678	0.181	0.932	-0.352	0.010	1.059	1.118
19	Lecturer	NoCJ	0.666	0.468	0.862	-0.937	0.019	1.041	1.079
18	GoLecturer	NoCJ	0.662	0.235	0.911	-0.476	0.008	1.034	1.065
17	LV4, GoLecturer	NoCJ	0.661	0.235	0.911	-0.475	0.007	1.033	1.062
16	GoLecturer	NoCJ, LV4	0.659	0.235	0.911	-0.477	0.136	2.388	2.124
15	CJLV1	Lecturer	0.657	0.215	0.915	-0.440	-0.015	0.935	0.866
14	LV4	NoCJ	0.654	0.276	0.897	-0.568	0.006	1.022	1.041
13	LV1	Lecturer, NoCJ	0.645	0.172	0.925	-0.361	0.047	1.377	1.496
12	Lecturer, GnLecturer	NoCJ	0.638	0.285	0.888	-0.609	-0.001	0.997	0.994
11	Lecturer	GnLecturer	0.636	0.447	0.850	-0.958	0.060	1.155	1.235
10	Asst Prof.	GoLecturer	0.630	0.170	0.921	-0.370	0.074	1.770	1.739
9	Asst Prof.	LV4, GoLecturer	0.626	0.169	0.921	-0.371	0.073	1.765	1.726
8	Lecturer, NoCJ	GnLecturer	0.609	0.285	0.875	-0.651	0.027	1.106	1.149
7	GnLecturer	NoCJ	0.608	0.335	0.861	-0.766	-0.018	0.950	0.918
6	CJLV1	GnLecturer	0.600	0.196	0.901	-0.458	0.016	1.090	1.124
5	Asst Prof.	NoCJ	0.584	0.158	0.911	-0.382	-0.015	0.912	0.865

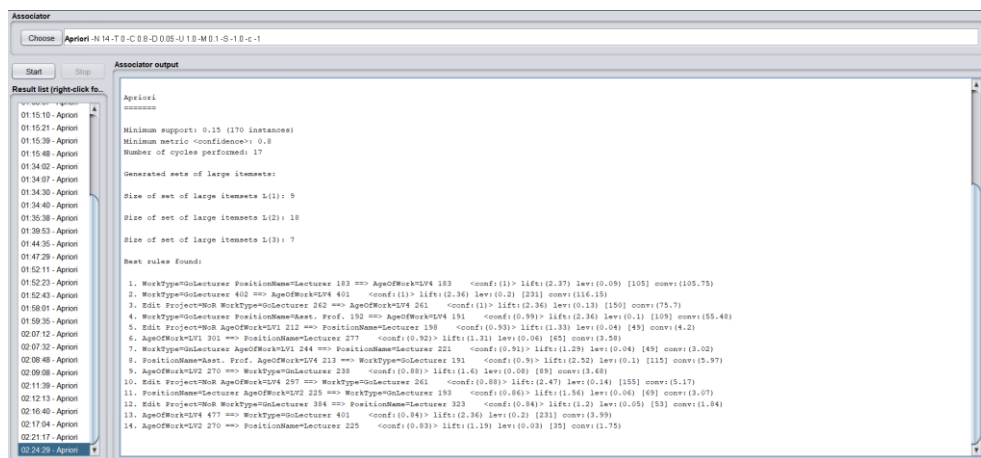
ภาพที่ ข.11 ภาพการวิเคราะห์ข้อมูล Conference , Journal โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 50%



ภาพที่ ข.12 ภาพการวิเคราะห์ข้อมูล Conference , Journal โดยใช้โปรแกรม Weka กำหนดค่า Confident 50%

No.	Premises	Conclusion	Support	Confiden... ↓	LaPlace	Gain	p-s	Lift	ConvictL...
17	Lecturer, GoLecturer	LV4	0.162	1	1	-0.162	0.094	2.369	*
16	GoLecturer	LV4	0.355	0.998	0.999	-0.357	0.205	2.363	232.306
15	NoR, GoLecturer	LV4	0.231	0.996	0.999	-0.233	0.133	2.360	151.404
14	GoLecturer, Asst. Prof.	LV4	0.169	0.995	0.999	-0.171	0.097	2.357	110.952
13	NoR, LV1	Lecturer	0.175	0.934	0.990	-0.200	0.043	1.329	4.503
12	LV1	Lecturer	0.245	0.920	0.983	-0.288	0.058	1.310	3.729
11	GnLecturer, LV1	Lecturer	0.196	0.906	0.983	-0.236	0.044	1.289	3.154
10	LV4, Asst. Prof.	GoLecturer	0.169	0.897	0.984	-0.208	0.102	2.521	6.237
9	LV2	GnLecturer	0.211	0.881	0.977	-0.267	0.079	1.601	3.793
8	NoR, LV4	GoLecturer	0.231	0.879	0.975	-0.295	0.137	2.470	5.315
7	Lecturer, LV2	GnLecturer	0.171	0.858	0.976	-0.227	0.061	1.558	3.161
6	NoR, GnLecturer	Lecturer	0.286	0.841	0.960	-0.394	0.047	1.197	1.872
5	LV4	GoLecturer	0.355	0.841	0.953	-0.489	0.205	2.363	4.044
4	LV2	Lecturer	0.199	0.833	0.968	-0.279	0.031	1.186	1.784

ภาพที่ ข.13 ภาพการวิเคราะห์ข้อมูล Project โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 80%



ภาพที่ ข.14 ภาพการวิเคราะห์ข้อมูล Project โดยใช้โปรแกรม Weka กำหนดค่า Confident 80%

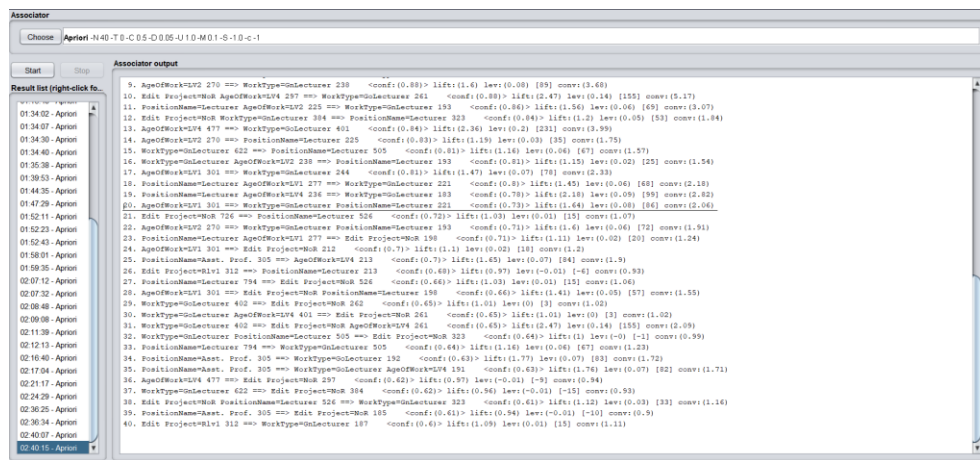
No.	Premises	Conclusion	Support	Confiden... ↓	LaPlace	Gain	p-s	Lift	Convictl...
23	GoLecturer	LV4	0.355	0.998	0.999	-0.357	0.205	2.363	232.306
22	NoR, GoLecturer	LV4	0.231	0.996	0.999	-0.233	0.133	2.360	151.404
21	GoLecturer, Asst. Prof.	LV4	0.169	0.995	0.999	-0.171	0.097	2.357	110.952
20	NoR, LV1	Lecturer	0.175	0.934	0.990	-0.200	0.043	1.329	4.503
19	LV1	Lecturer	0.245	0.920	0.983	-0.288	0.058	1.310	3.729
18	GnLecturer, LV1	Lecturer	0.196	0.906	0.983	-0.236	0.044	1.289	3.154
17	LV4, Asst. Prof.	GoLecturer	0.169	0.897	0.984	-0.208	0.102	2.521	6.237
16	LV2	GnLecturer	0.211	0.881	0.977	-0.267	0.079	1.601	3.793
15	NoR, LV4	GoLecturer	0.231	0.879	0.975	-0.295	0.137	2.470	5.315
14	Lecturer, LV2	GnLecturer	0.171	0.858	0.976	-0.227	0.061	1.558	3.161
13	NoR, GnLecturer	Lecturer	0.286	0.841	0.960	-0.394	0.047	1.197	1.872
12	LV4	GoLecturer	0.355	0.841	0.953	-0.489	0.205	2.363	4.044
11	LV2	Lecturer	0.199	0.833	0.968	-0.279	0.031	1.186	1.784
10	GnLecturer	Lecturer	0.447	0.812	0.933	-0.654	0.060	1.155	1.581
9	GnLecturer, LV2	Lecturer	0.171	0.811	0.967	-0.250	0.023	1.154	1.573
8	LV1	GnLecturer	0.216	0.811	0.960	-0.317	0.069	1.473	2.374
7	Lecturer, LV1	GnLecturer	0.196	0.798	0.960	-0.295	0.061	1.449	2.224
6	Lecturer, LV4	GoLecturer	0.162	0.775	0.961	-0.256	0.088	2.180	2.869
5	LV1	Lecturer, GnLecturer	0.196	0.734	0.944	-0.337	0.077	1.643	2.081

ภาพที่ ข.15 ภาพการวิเคราะห์ข้อมูล Project โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 70%

ภาพที่ ข.16 ภาพการวิเคราะห์ข้อมูล Project โดยใช้โปรแกรม Weka กำหนดค่า Confident 70%

No.	Premises	Conclusion	Support	Confiden... ↓	LaPlace	Gain	p-s	Lift
25	Lecturer, LV4	GoLecturer	0.162	0.775	0.961	-0.256	0.088	2.180
24	LV1	Lecturer, GnLecturer	0.196	0.734	0.944	-0.337	0.077	1.643
23	NoR	Lecturer	0.465	0.725	0.892	-0.819	0.014	1.031
22	LV2	Lecturer, GnLecturer	0.171	0.715	0.945	-0.307	0.064	1.599
21	Lecturer, LV1	NoR	0.175	0.715	0.944	-0.315	0.018	1.113
20	LV1	NoR	0.188	0.704	0.938	-0.345	0.016	1.096
19	Asst. Prof.	LV4	0.188	0.698	0.936	-0.351	0.075	1.654
18	Rlv1	Lecturer	0.188	0.683	0.931	-0.364	-0.006	0.972
17	Lecturer	NoR	0.465	0.662	0.861	-0.940	0.014	1.031
16	LV1	Lecturer, NoR	0.175	0.658	0.928	-0.358	0.051	1.413
15	GoLecturer	NoR	0.232	0.652	0.909	-0.480	0.003	1.014
14	LV4, GoLecturer	NoR	0.231	0.651	0.909	-0.479	0.003	1.013
13	GoLecturer	NoR, LV4	0.231	0.649	0.908	-0.481	0.137	2.470
12	Lecturer, GnLecturer	NoR	0.286	0.640	0.889	-0.608	-0.001	0.996
11	Lecturer	GnLecturer	0.447	0.636	0.850	-0.958	0.060	1.155
10	Asst. Prof.	GoLecturer	0.170	0.630	0.921	-0.370	0.074	1.770
9	Asst. Prof.	LV4, GoLecturer	0.169	0.626	0.921	-0.371	0.073	1.765
8	LV4	NoR	0.263	0.623	0.888	-0.581	-0.008	0.969
7	GnLecturer	NoR	0.340	0.617	0.864	-0.761	-0.014	0.961
6	Lecturer, NoR	GnLecturer	0.286	0.614	0.877	-0.645	0.030	1.116
5	Asst. Prof.	NoR	0.164	0.607	0.916	-0.376	-0.010	0.944
4	Rlv1	GnLecturer	0.165	0.599	0.913	-0.387	0.014	1.089

ภาพที่ ข.17 ภาพการวิเคราะห์ข้อมูล Project โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 50%



ภาพที่ ข.18 ภาพการวิเคราะห์ข้อมูล Project โดยใช้โปรแกรม Weka กำหนดค่า Confident 50%

No.	Premises	Conclusion	Confiden... ↓	Support	LaPlace	Gain	p-s	Lift	ConvictL...
17	Lecturer, GoLecturer	LV4	1	0.162	1	-0.162	0.094	2.369	=
16	GoLecturer	LV4	0.998	0.355	0.999	-0.357	0.205	2.363	232.306
15	NoC, GoLecturer	LV4	0.996	0.249	0.999	-0.250	0.143	2.361	162.961
14	GoLecturer, Asst Prof.	LV4	0.995	0.169	0.999	-0.171	0.097	2.357	110.952
13	NoC, LV1	Lecturer	0.944	0.178	0.991	-0.199	0.045	1.343	5.278
12	LV1	Lecturer	0.920	0.245	0.983	-0.288	0.058	1.310	3.729
11	GnLecturer, LV1	Lecturer	0.905	0.195	0.983	-0.236	0.044	1.289	3.154
10	LV4, Asst. Prof.	GoLecturer	0.897	0.169	0.984	-0.208	0.102	2.521	6.237
9	LV2	GnLecturer	0.881	0.211	0.977	-0.267	0.079	1.601	3.793
8	Lecturer, LV2	GnLecturer	0.858	0.171	0.976	-0.227	0.061	1.558	3.161
7	NoC, LV4	GoLecturer	0.852	0.249	0.966	-0.335	0.145	2.394	4.339
6	LV4	GoLecturer	0.841	0.355	0.953	-0.489	0.205	2.363	4.044
5	NoC, GnLecturer	Lecturer	0.839	0.299	0.958	-0.414	0.049	1.194	1.844
4	LV2	Lecturer	0.833	0.199	0.968	-0.279	0.031	1.186	1.784

ภาพที่ ข.19 ภาพการวิเคราะห์ข้อมูล Conference โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 80%

Associator

Choose **Apriori** -N14-T8-C88-D05-U18-M1-S-18-c-1

Start Stop

Associator output

Result list (right-click...)

```

00:23:53 - Apriori
00:24:07 - Apriori
00:40:26 - Apriori
00:40:26 - Apriori_0
01:08:45 - Apriori
01:07:28 - Apriori
01:07:29 - Apriori
01:07:46 - Apriori
01:08:07 - Apriori
01:15:10 - Apriori
01:15:21 - Apriori
01:15:39 - Apriori
01:15:48 - Apriori
01:34:02 - Apriori
01:34:07 - Apriori
01:34:30 - Apriori
01:34:40 - Apriori
01:35:38 - Apriori
01:39:53 - Apriori
01:44:35 - Apriori
01:47:29 - Apriori
01:52:23 - Apriori
01:52:43 - Apriori
01:58:01 - Apriori
01:59:35 - Apriori

```

Associator output

```

Minimum support: 0.15 (170 instances)
Minimum metric <confidence>: 0.8
Number of cycles performed: 17

Generated sets of large itemsets:

Size of set of large itemsets L(1): 9
Size of set of large itemsets L(2): 18
Size of set of large itemsets L(3): 8

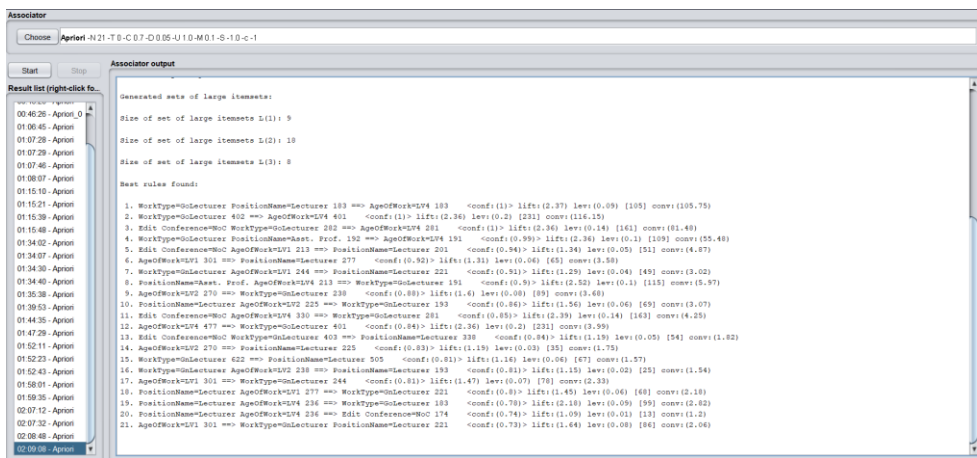
Best rules found:
1. WorkType=GoLecturer PositionName=Lecturer 183 ==> AgeOfWork=LV4 183 <conf:(1)> lift:(2.37) lev:(0.09) [105] conv:(105.75)
2. WorkType=GoLecturer 402 ==> AgeOfWork=LV4 401 <conf:(1)> lift:(2.36) lev:(0.2) [231] conv:(116.15)
3. Edit Conference=NoC WorkType=GoLecturer 232 ==> AgeOfWork=LV4 281 <conf:(1)> lift:(2.36) lev:(0.24) [161] conv:(81.48)
4. WorkType=GoLecturer PositionName=Asst. Prof. 192 ==> AgeOfWork=LV4 191 <conf:(0.99)> lift:(2.36) lev:(0.1) [109] conv:(55.48)
5. Edit Conference=NoC AgeOfWork=LV1 213 ==> PositionName=Lecturer 201 <conf:(0.94)> lift:(1.84) lev:(0.05) [51] conv:(4.87)
6. AgeOfWork=LV1 301 ==> PositionName=Lecturer 277 <conf:(0.92)> lift:(1.31) lev:(0.65) [65] conv:(2.58)
7. WorkType=GoLecturer AgeOfWork=LV1 244 ==> PositionName=Lecturer 221 <conf:(0.91)> lift:(1.29) lev:(0.04) [49] conv:(3.02)
8. PositionName=Asst. Prof. AgeOfWork=LV4 213 ==> WorkType=GoLecturer 191 <conf:(0.9)> lift:(2.52) lev:(0.1) [115] conv:(5.97)
9. AgeOfWork=LV2 270 ==> WorkType=GoLecturer 238 <conf:(0.88)> lift:(1.4) lev:(0.08) [99] conv:(3.48)
10. PositionName=Lecturer AgeOfWork=LV2 225 ==> WorkType=GoLecturer 193 <conf:(0.86)> lift:(1.56) lev:(0.06) [69] conv:(3.07)
11. Edit Conference=NoC AgeOfWork=LV4 130 ==> WorkType=GoLecturer 281 <conf:(0.85)> lift:(2.39) lev:(0.14) [163] conv:(4.25)
12. AgeOfWork=LV4 477 ==> WorkType=GoLecturer 401 <conf:(0.84)> lift:(2.38) lev:(0.2) [231] conv:(12.99)
13. Edit Conference=NoC WorkType=GoLecturer 403 ==> PositionName=Lecturer 338 <conf:(0.84)> lift:(1.15) lev:(0.05) [54] conv:(1.82)
14. AgeOfWork=LV2 270 ==> PositionName=Lecturer 225 <conf:(0.83)> lift:(1.19) lev:(0.03) [35] conv:(1.75)

```

ภาพที่ ข.20 ภาพการวิเคราะห์ข้อมูล Conference โดยใช้โปรแกรม Weka กำหนดค่า Confident 80%

No.	Premises	Conclusion	Support	Confiden... ↓	LaPlace	Gain	p-s	Lift	ConvictL..
26	GoLecturer, Asst. Prof.	LV4	0.169	0.995	0.999	-0.171	0.097	2.357	110.952
25	NoC, LV1	Lecturer	0.178	0.944	0.991	-0.199	0.045	1.343	5.278
24	LV1	Lecturer	0.245	0.920	0.983	-0.288	0.058	1.310	3.729
23	GnLecturer, LV1	Lecturer	0.196	0.906	0.983	-0.236	0.044	1.289	3.154
22	LV4, Asst. Prof.	GoLecturer	0.169	0.897	0.984	-0.208	0.102	2.521	6.237
21	LV2	GnLecturer	0.211	0.881	0.977	-0.267	0.079	1.601	3.793
20	Lecturer, LV2	GnLecturer	0.171	0.858	0.976	-0.227	0.061	1.558	3.161
19	NoC, LV4	GoLecturer	0.249	0.852	0.966	-0.335	0.145	2.394	4.339
18	LV4	GoLecturer	0.355	0.841	0.953	-0.489	0.205	2.363	4.044
17	NoC, GnLecturer	Lecturer	0.299	0.839	0.958	-0.414	0.049	1.194	1.844
16	LV2	Lecturer	0.199	0.833	0.968	-0.279	0.031	1.186	1.784
15	GnLecturer	Lecturer	0.447	0.812	0.933	-0.654	0.060	1.155	1.581
14	GnLecturer, LV2	Lecturer	0.171	0.811	0.967	-0.250	0.023	1.154	1.573
13	LV1	GnLecturer	0.216	0.811	0.960	-0.317	0.069	1.473	2.374
12	Lecturer, LV1	GnLecturer	0.196	0.798	0.960	-0.295	0.061	1.449	2.224
11	Lecturer, LV4	GoLecturer	0.162	0.775	0.961	-0.256	0.088	2.180	2.869
10	NoC, LV1	GnLecturer	0.146	0.775	0.964	-0.231	0.042	1.407	1.995
9	Lecturer, LV4	NoC	0.154	0.737	0.955	-0.264	0.012	1.086	1.223
8	LV1	Lecturer, GnLecturer	0.196	0.734	0.944	-0.337	0.077	1.643	2.081

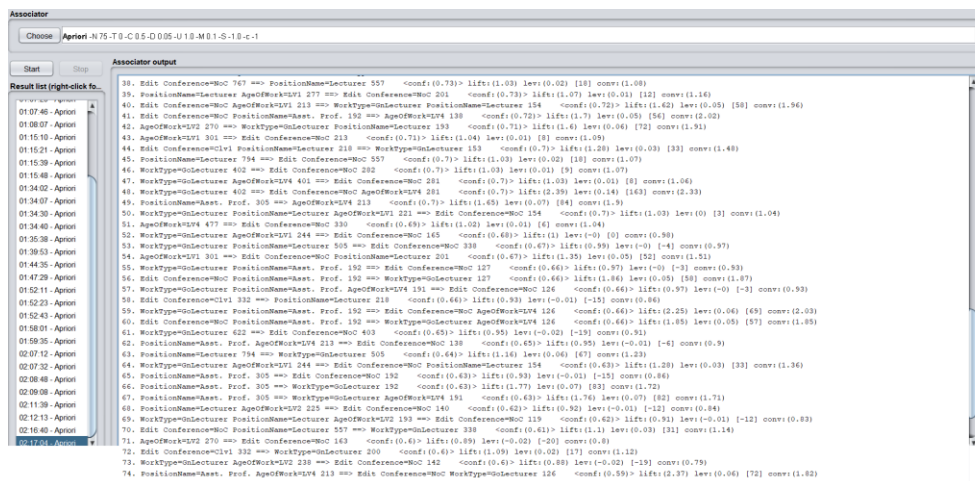
ภาพที่ ข.21 ภาพการวิเคราะห์ข้อมูล Conference โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 70%



ภาพที่ ข.22 ภาพการวิเคราะห์ข้อมูล Conference โดยใช้โปรแกรม Weka กำหนดค่า Confident 70%

No.	Premises	Conclusion	Confiden... ↓	Support	LaPlace	Gain	p-s	Lift	ConvictL...
31	Lecturer, LV4	GoLecturer	0.775	0.162	0.961	-0.256	0.088	2.180	2.869
30	NoC, LV1	GnLecturer	0.775	0.146	0.964	-0.231	0.042	1.407	1.995
29	Lecturer, LV4	NoC	0.737	0.154	0.955	-0.284	0.012	1.086	1.223
28	LV1	Lecturer, GnLecturer	0.734	0.196	0.944	-0.337	0.077	1.643	2.081
27	NoC	Lecturer	0.726	0.493	0.889	-0.865	0.016	1.034	1.086
26	Lecturer, LV1	NoC	0.726	0.178	0.946	-0.312	0.011	1.069	1.171
25	LV2	Lecturer, GnLecturer	0.715	0.171	0.945	-0.307	0.064	1.599	1.939
24	LV1	NoC	0.708	0.188	0.939	-0.344	0.008	1.043	1.099
23	Lecturer	NoC	0.702	0.493	0.877	-0.912	0.016	1.034	1.076
22	GoLecturer	NoC	0.701	0.250	0.922	-0.482	0.008	1.033	1.076
21	LV4, GoLecturer	NoC	0.701	0.249	0.922	-0.461	0.008	1.032	1.073
20	GoLecturer	NoC, LV4	0.699	0.249	0.921	-0.463	0.145	2.394	2.352
19	Asst. Prof.	LV4	0.698	0.188	0.936	-0.351	0.075	1.654	1.916
18	LV4	NoC	0.692	0.292	0.909	-0.552	0.006	1.019	1.042
17	GnLecturer, LV1	NoC	0.676	0.146	0.943	-0.286	-0.001	0.996	0.992
16	Lecturer, GnLecturer	NoC	0.669	0.299	0.898	-0.595	-0.004	0.986	0.971
15	LV1	Lecturer, NoC	0.668	0.178	0.930	-0.355	0.047	1.355	1.526
14	Clv1	Lecturer	0.657	0.193	0.922	-0.395	-0.014	0.934	0.866
13	GnLecturer	NoC	0.648	0.357	0.875	-0.744	-0.017	0.955	0.912
12	Lecturer	GnLecturer	0.636	0.447	0.850	-0.958	0.060	1.155	1.235
10	Asst. Prof.	NoC	0.630	0.170	0.921	-0.370	-0.013	0.927	0.867
11	Asst. Prof.	GoLecturer	0.630	0.170	0.921	-0.370	0.074	1.770	1.739
9	Asst. Prof.	LV4, GoLecturer	0.626	0.169	0.921	-0.371	0.073	1.765	1.726
8	Lecturer, NoC	GnLecturer	0.607	0.299	0.870	-0.687	0.028	1.102	1.143
7	LV2	NoC	0.604	0.144	0.924	-0.334	-0.018	0.889	0.811
6	Clv1	GnLecturer	0.602	0.177	0.910	-0.411	0.015	1.094	1.131
5	LV4	NoC, GoLecturer	0.589	0.249	0.878	-0.596	0.143	2.361	1.826

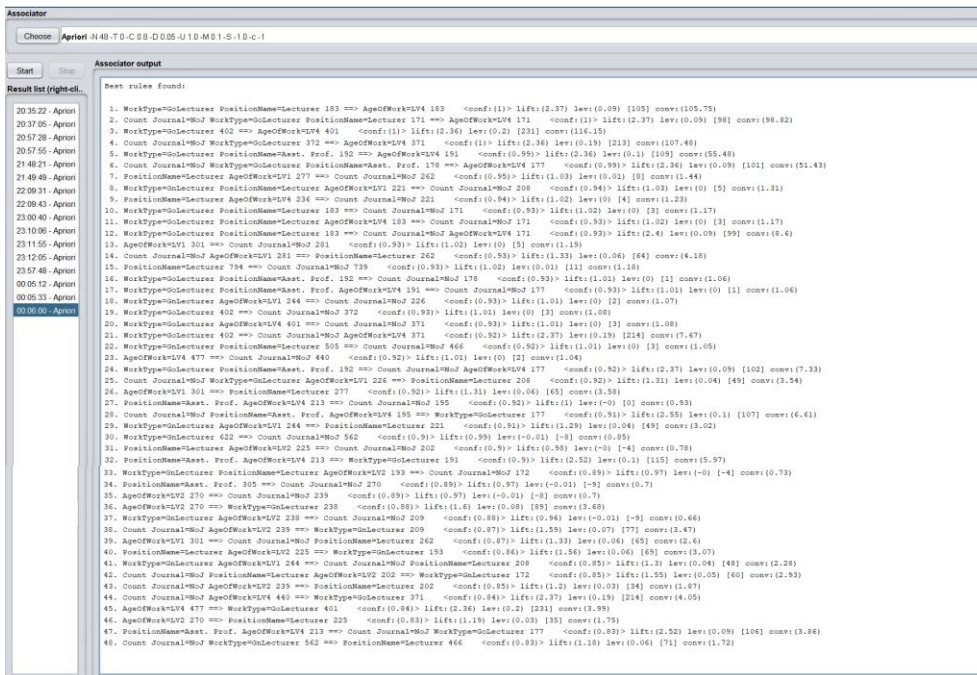
ภาพที่ ข.23 ภาพการวิเคราะห์ข้อมูล Conference โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 50%



ภาพที่ ข.24 ภาพการวิเคราะห์ข้อมูล Conference โดยใช้โปรแกรม Weka กำหนดค่า Confident 50%

No.	Premises	Conclusion	Support	Confiden... ↓	LaPlace	Gain	p-s	Lift	ConvictL...
52	Lecturer, GoLecturer	LV4	0.162	1	1	-0.162	0.094	2.369	∞
53	NoJ, Lecturer, GoLecturer	LV4	0.151	1	1	-0.151	0.087	2.369	∞
51	GoLecturer	LV4	0.355	0.998	0.999	-0.357	0.205	2.363	232.306
50	NoJ, GoLecturer	LV4	0.328	0.997	0.999	-0.330	0.189	2.363	214.970
49	GoLecturer, Asst. Prof.	LV4	0.169	0.995	0.999	-0.171	0.097	2.357	110.952
48	NoJ, GoLecturer, Asst. Prof.	LV4	0.157	0.994	0.999	-0.158	0.090	2.356	102.862
47	Lecturer, LV1	NoJ	0.232	0.946	0.989	-0.258	0.007	1.032	1.536
46	Lecturer, GnLecturer, LV1	NoJ	0.184	0.941	0.990	-0.207	0.005	1.027	1.414
45	Lecturer, LV4	NoJ	0.196	0.936	0.989	-0.222	0.004	1.021	1.309
42	Lecturer, GoLecturer	NoJ	0.151	0.934	0.991	-0.173	0.003	1.019	1.269
43	Lecturer, GoLecturer	NoJ, LV4	0.151	0.934	0.991	-0.173	0.088	2.400	9.312
44	Lecturer, LV4, GoLecturer	NoJ	0.151	0.934	0.991	-0.173	0.003	1.019	1.269
41	LV1	NoJ	0.249	0.934	0.986	-0.284	0.004	1.018	1.252
40	NoJ, LV1	Lecturer	0.232	0.932	0.987	-0.265	0.057	1.327	4.398
39	Lecturer	NoJ	0.654	0.931	0.971	-0.751	0.010	1.015	1.201
38	GoLecturer, Asst. Prof.	NoJ	0.158	0.927	0.989	-0.182	0.002	1.011	1.141
37	LV4, GoLecturer, Asst. Prof.	NoJ	0.157	0.927	0.989	-0.181	0.002	1.011	1.135
36	GnLecturer, LV1	NoJ	0.200	0.926	0.987	-0.232	0.002	1.010	1.128
35	GoLecturer	NoJ	0.329	0.925	0.980	-0.382	0.003	1.009	1.115
34	LV4, GoLecturer	NoJ	0.328	0.925	0.980	-0.381	0.003	1.009	1.112
33	GoLecturer	NoJ, LV4	0.328	0.923	0.980	-0.383	0.190	2.370	7.918
32	Lecturer, GnLecturer	NoJ	0.412	0.923	0.976	-0.481	0.003	1.006	1.077
31	LV4	NoJ	0.389	0.922	0.977	-0.455	0.002	1.006	1.072
30	GoLecturer, Asst. Prof.	NoJ, LV4	0.157	0.922	0.989	-0.183	0.090	2.368	7.816
29	NoJ, GnLecturer, LV1	Lecturer	0.184	0.920	0.987	-0.216	0.044	1.310	3.733
28	LV1	Lecturer	0.245	0.920	0.983	-0.288	0.058	1.310	3.729
27	LV4, Asst. Prof.	NoJ	0.173	0.915	0.987	-0.204	-0.000	0.999	0.984
26	NoJ, LV4, Asst. Prof.	GoLecturer	0.157	0.908	0.986	-0.188	0.095	2.551	6.979
25	GnLecturer, LV1	Lecturer	0.196	0.906	0.983	-0.236	0.044	1.289	3.154
24	GnLecturer	NoJ	0.497	0.904	0.966	-0.604	-0.007	0.986	0.862
23	Lecturer, LV2	NoJ	0.179	0.898	0.983	-0.219	-0.004	0.979	0.814
22	LV4, Asst. Prof.	GoLecturer	0.169	0.897	0.984	-0.208	0.102	2.521	6.237
21	Lecturer, GnLecturer, LV2	NoJ	0.152	0.891	0.984	-0.189	-0.004	0.972	0.765
20	Asst. Prof.	NoJ	0.239	0.885	0.976	-0.301	-0.009	0.966	0.725
19	LV2	NoJ	0.212	0.885	0.978	-0.266	-0.008	0.966	0.725
18	LV2	GnLecturer	0.211	0.881	0.977	-0.267	0.079	1.601	3.793
17	GnLecturer, LV2	NoJ	0.185	0.878	0.979	-0.236	-0.008	0.958	0.683
16	NoJ, LV2	GnLecturer	0.185	0.874	0.978	-0.238	0.069	1.589	3.581
15	LV1	NoJ, Lecturer	0.232	0.870	0.973	-0.301	0.058	1.331	2.671
14	Lecturer, LV2	GnLecturer	0.171	0.858	0.976	-0.227	0.061	1.558	3.161
13	GnLecturer, LV1	NoJ, Lecturer	0.184	0.852	0.974	-0.248	0.043	1.303	2.345
12	NoJ, Lecturer, LV2	GnLecturer	0.152	0.851	0.977	-0.205	0.054	1.547	3.027
11	NoJ, LV2	Lecturer	0.179	0.845	0.973	-0.244	0.030	1.203	1.921
10	NoJ, LV4	GoLecturer	0.328	0.843	0.956	-0.450	0.190	2.370	4.108
9	LV4	GoLecturer	0.355	0.841	0.953	-0.489	0.205	2.363	4.044
8	LV2	Lecturer	0.199	0.833	0.968	-0.279	0.031	1.186	1.784
7	LV4, Asst. Prof.	NoJ, GoLecturer	0.157	0.831	0.973	-0.220	0.095	2.524	3.969
6	NoJ, GnLecturer	Lecturer	0.412	0.829	0.943	-0.582	0.063	1.180	1.741

ภาพที่ ข.25 ภาพการวิเคราะห์ข้อมูล Journal โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 80%



ภาพที่ ข.26 ภาพการวิเคราะห์ข้อมูล Journal โดยใช้โปรแกรม Weka กำหนดค่า Confident 80%

No.	Premises	Conclusion	Support	Confiden... ↓	LaPlace	Gain	p-s	Lift	ConvictL...
71	Lecturer, GoLecturer	LV4	0.162	1	1	-0.162	0.094	2.369	=
72	NoJ, Lecturer, GoLecturer	LV4	0.151	1	1	-0.151	0.087	2.369	=
70	GoLecturer	LV4	0.355	0.998	0.999	-0.357	0.205	2.363	232.306
69	NoJ, GoLecturer	LV4	0.328	0.997	0.999	-0.330	0.189	2.363	214.970
68	GoLecturer, Asst. Prof.	LV4	0.169	0.995	0.999	-0.171	0.097	2.357	110.952
67	NoJ, GoLecturer, Asst. Prof.	LV4	0.157	0.994	0.999	-0.158	0.090	2.356	102.862
66	Lecturer, LV1	NoJ	0.232	0.946	0.989	-0.258	0.007	1.032	1.536
65	Lecturer, GnLecturer, LV1	NoJ	0.184	0.941	0.990	-0.207	0.005	1.027	1.414
64	Lecturer, LV4	NoJ	0.196	0.936	0.989	-0.222	0.004	1.021	1.309
61	Lecturer, GoLecturer	NoJ	0.151	0.934	0.991	-0.173	0.003	1.019	1.269
62	Lecturer, GoLecturer	NoJ, LV4	0.151	0.934	0.991	-0.173	0.088	2.400	9.312
63	Lecturer, LV4, GoLecturer	NoJ	0.151	0.934	0.991	-0.173	0.003	1.019	1.269
60	LV1	NoJ	0.249	0.934	0.986	-0.284	0.004	1.018	1.252
59	NoJ, LV1	Lecturer	0.232	0.932	0.987	-0.265	0.057	1.327	4.398
58	Lecturer	NoJ	0.654	0.931	0.971	-0.751	0.010	1.015	1.201
57	GoLecturer, Asst. Prof.	NoJ	0.158	0.927	0.989	-0.182	0.002	1.011	1.141
56	LV4, GoLecturer, Asst. Prof.	NoJ	0.157	0.927	0.989	-0.181	0.002	1.011	1.135
55	GnLecturer, LV1	NoJ	0.200	0.926	0.987	-0.232	0.002	1.010	1.128
54	GoLecturer	NoJ	0.329	0.925	0.980	-0.382	0.003	1.009	1.115
53	LV4, GoLecturer	NoJ	0.328	0.925	0.980	-0.381	0.003	1.009	1.112
52	GoLecturer	NoJ, LV4	0.328	0.923	0.980	-0.383	0.190	2.370	7.918
51	Lecturer, GnLecturer	NoJ	0.412	0.923	0.976	-0.481	0.003	1.006	1.077
50	LV4	NoJ	0.389	0.922	0.977	-0.455	0.002	1.006	1.072
49	GoLecturer, Asst. Prof.	NoJ, LV4	0.157	0.922	0.989	-0.183	0.090	2.368	7.816
48	NoJ, GnLecturer, LV1	Lecturer	0.184	0.920	0.987	-0.216	0.044	1.310	3.733
47	LV1	Lecturer	0.245	0.920	0.983	-0.288	0.058	1.310	3.729
46	LV4, Asst. Prof.	NoJ	0.173	0.915	0.987	-0.204	-0.000	0.999	0.984
45	NoJ, LV4, Asst. Prof.	GoLecturer	0.157	0.908	0.986	-0.188	0.095	2.551	6.979
44	GnLecturer, LV1	Lecturer	0.196	0.906	0.983	-0.236	0.044	1.289	3.154
43	GnLecturer	NoJ	0.497	0.904	0.966	-0.604	-0.007	0.986	0.862
42	Lecturer, LV2	NoJ	0.179	0.898	0.983	-0.219	-0.004	0.979	0.814
41	LV4, Asst. Prof.	GoLecturer	0.169	0.897	0.984	-0.208	0.102	2.521	6.237
40	Lecturer, GnLecturer, LV2	NoJ	0.152	0.891	0.984	-0.189	-0.004	0.972	0.765
39	Asst. Prof.	NoJ	0.239	0.885	0.976	-0.301	-0.009	0.966	0.725
38	LV2	NoJ	0.212	0.885	0.978	-0.286	-0.008	0.966	0.725
37	LV2	GnLecturer	0.211	0.881	0.977	-0.267	0.079	1.601	3.793
36	GnLecturer, LV2	NoJ	0.185	0.878	0.979	-0.236	-0.008	0.958	0.683
35	NoJ, LV2	GnLecturer	0.185	0.874	0.978	-0.238	0.069	1.589	3.581
34	LV1	NoJ, Lecturer	0.232	0.870	0.973	-0.301	0.058	1.331	2.671
33	Lecturer, LV2	GnLecturer	0.171	0.858	0.976	-0.227	0.061	1.558	3.161
32	GnLecturer, LV1	NoJ, Lecturer	0.184	0.852	0.974	-0.248	0.043	1.303	2.345
31	NoJ, Lecturer, LV2	GnLecturer	0.152	0.851	0.977	-0.205	0.054	1.547	3.027
30	NoJ, LV2	Lecturer	0.179	0.845	0.973	-0.244	0.030	1.203	1.921
29	NoJ, LV4	GoLecturer	0.328	0.843	0.956	-0.450	0.190	2.370	4.108
28	LV4	GoLecturer	0.355	0.841	0.953	-0.489	0.205	2.363	4.044
27	LV2	Lecturer	0.199	0.833	0.968	-0.279	0.031	1.186	1.784
26	LV4, Asst. Prof.	NoJ, GoLecturer	0.157	0.831	0.973	-0.220	0.095	2.524	3.969
25	NoJ, GnLecturer	Lecturer	0.412	0.829	0.943	-0.582	0.063	1.180	1.741
24	NoJ, GnLecturer, LV2	Lecturer	0.152	0.823	0.972	-0.218	0.022	1.171	1.680
23	GnLecturer	Lecturer	0.447	0.812	0.933	-0.654	0.060	1.155	1.581
22	GnLecturer, LV2	Lecturer	0.171	0.811	0.967	-0.250	0.023	1.154	1.573
21	LV1	GnLecturer	0.216	0.811	0.960	-0.317	0.069	1.473	2.374
20	NoJ, LV1	GnLecturer	0.200	0.804	0.961	-0.297	0.063	1.461	2.297
19	Lecturer, LV1	GnLecturer	0.196	0.798	0.960	-0.295	0.061	1.449	2.224
18	NoJ, Lecturer, LV1	GnLecturer	0.184	0.794	0.961	-0.280	0.056	1.442	2.181
17	LV4	NoJ, GoLecturer	0.328	0.778	0.934	-0.516	0.189	2.363	3.019
16	Lecturer, LV4	GoLecturer	0.162	0.775	0.961	-0.256	0.088	2.180	2.869
15	LV2	NoJ, GnLecturer	0.185	0.774	0.956	-0.293	0.066	1.556	2.225
14	NoJ, Lecturer, LV4	GoLecturer	0.151	0.774	0.963	-0.240	0.082	2.175	2.848
13	Lecturer, LV2	NoJ, GnLecturer	0.152	0.764	0.961	-0.246	0.053	1.537	2.134
12	Lecturer, LV1	NoJ, GnLecturer	0.184	0.751	0.951	-0.306	0.062	1.510	2.018
11	LV1	NoJ, GnLecturer	0.200	0.751	0.948	-0.333	0.068	1.510	2.017
10	GnLecturer	NoJ, Lecturer	0.412	0.749	0.911	-0.688	0.052	1.146	1.380
9	LV2	NoJ, Lecturer	0.179	0.748	0.951	-0.299	0.022	1.144	1.374

ภาพที่ ข.27 ภาพการวิเคราะห์ข้อมูล Journal โดยใช้โปรแกรม Rapid Miner กำหนดค่า Confident 70%

Associator

Choose **Apriori -N64-T0-C87-D005-U10-M01-S-10-c-1**

Start Stop

Associator output

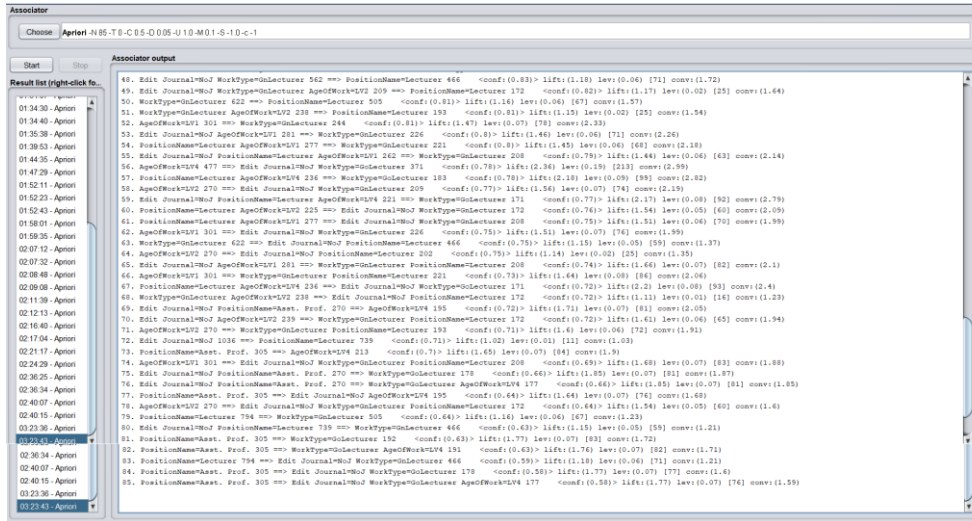
Best rules found:

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1. WorkType=>Lecturer PositionName=Lecturers 183 ==> AgoOfWork=LIV 183 <conf:(11) lift:(2.37) lev:(0.09) [105] conv:(105.75)
2. Count Journal=>WorkType=>Lecturer PositionName=Lecturers 171 ==> AgoOfWork=LIV 171 <conf:(11) lift:(2.37) lev:(0.09) [59] conv:(59.82)
3. WorkType=>Lecturer 402 ==> AgoOfWork=LIV 401 <conf:(11) lift:(0.36) lev:(0.2) [231] conv:(116.15)
4. Count Journal=>WorkType=>Lecturer 372 ==> AgoOfWork=LIV 371 <conf:(11) lift:(2.36) lev:(0.19) [211] conv:(107.49)
5. WorkType=>Lecturer PositionName=Asst. Prof. 192 ==> AgoOfWork=LIV 191 <conf:(0.99) lift:(2.34) lev:(0.1) [109] conv:(55.49)
6. Count Journal=>WorkType=>Lecturer PositionName=Asst. Prof. 178 ==> AgoOfWork=LIV 177 <conf:(0.99) lift:(2.34) lev:(0.09) [101] conv:(51.43)
7. PositionName=Lecturers AgoOfWork=LIV 277 ==> Count Journal=>Lecturer 282 <conf:(0.93) lift:(1.03) lev:(0.01) [8] conv:(1.44)
8. WorkType=>Lecturer PositionName=Lecturers AgoOfWork=LIV 183 ==> Count Journal=>Lecturer 208 <conf:(0.94) lift:(1.03) lev:(0) [5] conv:(1.31)
9. PositionName=Lecturers AgoOfWork=LIV 236 ==> Count Journal=>Lecturer 221 <conf:(0.94) lift:(1.02) lev:(0) [4] conv:(1.23)
10. WorkType=>Lecturer PositionName=Lecturers 183 ==> Count Journal=>Lecturer 171 <conf:(0.93) lift:(1.02) lev:(0) [3] conv:(1.17)
11. WorkType=>Lecturer PositionName=Lecturers AgoOfWork=LIV 183 ==> Count Journal=>Lecturer 171 <conf:(0.93) lift:(1.02) lev:(0) [3] conv:(1.17)
12. WorkType=>Lecturer PositionName=Lecturers 183 ==> Count Journal=>Lecturer AgoOfWork=LIV 171 <conf:(0.93) lift:(2.4) lev:(0.09) [99] conv:(8.6)
13. AgoOfWork=LIV 301 ==> Count Journal=>Lecturer 291 <conf:(0.93) lift:(1.02) lev:(0) [5] conv:(1.19)
14. Count Journal=>Lecturer AgoOfWork=LIV 281 ==> PositionName=Lecturers 282 <conf:(0.93) lift:(1.33) lev:(0.06) [64] conv:(4.18)
15. PositionName=Lecturers 794 ==> Count Journal=>Lecturer 789 <conf:(0.93) lift:(1.02) lev:(0.01) [11] conv:(1.18)
16. WorkType=>Lecturer PositionName=Asst. Prof. 192 ==> Count Journal=>Lecturer 178 <conf:(0.93) lift:(1.01) lev:(0) [1] conv:(1.06)
17. WorkType=>Lecturer PositionName=Asst. Prof. AgoOfWork=LIV 193 ==> Count Journal=>Lecturer 177 <conf:(0.93) lift:(1.01) lev:(0) [1] conv:(1.06)
18. WorkType=>Lecturer AgoOfWork=LIV 244 ==> Count Journal=>Lecturer 226 <conf:(0.93) lift:(1.01) lev:(0) [2] conv:(1.07)
19. WorkType=>Lecturer 402 ==> Count Journal=>Lecturer 372 <conf:(0.93) lift:(1.01) lev:(0) [3] conv:(1.08)
20. WorkType=>Lecturer AgoOfWork=LIV 401 ==> Count Journal=>Lecturer 371 <conf:(0.93) lift:(1.01) lev:(0) [3] conv:(1.08)
21. WorkType=>Lecturer 402 ==> Count Journal=>Lecturer AgoOfWork=LIV 371 <conf:(0.92) lift:(2.37) lev:(0.19) [214] conv:(7.47)
22. WorkType=>Lecturer PositionName=Lecturers 505 ==> Count Journal=>Lecturer 466 <conf:(0.92) lift:(1.01) lev:(0) [3] conv:(1.05)
23. AgoOfWork=LIV 477 ==> Count Journal=>Lecturer 448 <conf:(0.92) lift:(1.01) lev:(0) [2] conv:(1.04)
24. WorkType=>Lecturer AgoOfWork=LIV 244 ==> Count Journal=>Lecturer AgoOfWork=LIV 177 <conf:(0.92) lift:(2.37) lev:(0.09) [102] conv:(7.33)
25. Count Journal=>WorkType=>Lecturer AgoOfWork=LIV 224 ==> PositionName=Lecturers 208 <conf:(0.92) lift:(1.31) lev:(0.04) [49] conv:(3.54)
26. AgoOfWork=LIV 301 ==> PositionName=Lecturers 277 <conf:(0.92) lift:(1.31) lev:(0.04) [49] conv:(3.54)
27. PositionName=Asst. Prof. AgoOfWork=LIV 219 ==> Count Journal=>Lecturer 195 <conf:(0.92) lift:(1) lev:(0) [0] conv:(0.93)
28. Count Journal=>PositionName=Asst. Prof. AgoOfWork=LIV 195 ==> WorkType=>Lecturers 177 <conf:(0.91) lift:(2.55) lev:(0.1) [107] conv:(6.41)
29. WorkType=>Lecturer AgoOfWork=LIV 244 ==> PositionName=Lecturers 221 <conf:(0.91) lift:(1.29) lev:(0.04) [49] conv:(3.02)
30. WorkType=>Lecturers 423 ==> Count Journal=>Lecturer 362 <conf:(0.91) lift:(0.99) lev:(0.01) [-8] conv:(0.89)
31. PositionName=Lecturers AgoOfWork=LIV 225 ==> Count Journal=>Lecturer 202 <conf:(0.9) lift:(0.94) lev:(-0) [-4] conv:(0.78)
32. PositionName=Asst. Prof. AgoOfWork=LIV 213 ==> WorkType=>Lecturers 191 <conf:(0.9) lift:(2.52) lev:(0.2) [115] conv:(9.97)
33. WorkType=>Lecturer PositionName=Lecturers AgoOfWork=LIV 193 ==> Count Journal=>Lecturer 172 <conf:(0.89) lift:(0.97) lev:(-0) [-4] conv:(0.73)
34. PositionName=Asst. Prof. 305 ==> Count Journal=>Lecturer 270 <conf:(0.89) lift:(0.97) lev:(-0.01) [-9] conv:(0.7)
35. AgoOfWork=LIV 270 ==> Count Journal=>Lecturer 239 <conf:(0.89) lift:(0.97) lev:(-0.01) [-8] conv:(0.7)
36. AgoOfWork=LIV 270 ==> WorkType=>Lecturers 238 <conf:(0.88) lift:(1.4) lev:(0.09) [89] conv:(5.49)
37. WorkType=>Lecturers AgoOfWork=LIV 238 ==> Count Journal=>Lecturer 209 <conf:(0.88) lift:(0.94) lev:(-0.01) [-9] conv:(0.66)
38. Count Journal=>WorkType=>Lecturers AgoOfWork=LIV 239 ==> WorkType=>Lecturers 209 <conf:(0.87) lift:(1.59) lev:(0.07) [77] conv:(3.47)
39. AgoOfWork=LIV 301 ==> Count Journal=>Lecturer PositionName=Lecturers 282 <conf:(0.87) lift:(1.33) lev:(0.04) [49] conv:(2.4)
40. PositionName=Lecturers AgoOfWork=LIV 225 ==> WorkType=>Lecturers 193 <conf:(0.86) lift:(1.56) lev:(0.06) [69] conv:(3.07)
41. WorkType=>Lecturer AgoOfWork=LIV 244 ==> Count Journal=>Lecturer PositionName=Lecturers 208 <conf:(0.85) lift:(1.3) lev:(0.04) [48] conv:(2.28)
42. Count Journal=>WorkType=>Lecturers AgoOfWork=LIV 202 ==> WorkType=>Lecturers 172 <conf:(0.85) lift:(1.55) lev:(0.05) [60] conv:(2.93)
43. Count Journal=>WorkType=>Lecturers AgoOfWork=LIV 239 ==> PositionName=Lecturers 202 <conf:(0.85) lift:(1.2) lev:(0.03) [84] conv:(1.87)
44. Count Journal=>WorkType=>Lecturers AgoOfWork=LIV 440 ==> WorkType=>Lecturers 371 <conf:(0.84) lift:(2.37) lev:(0.19) [214] conv:(4.05)
45. AgoOfWork=LIV 477 ==> WorkType=>Lecturers 401 <conf:(0.84) lift:(2.36) lev:(0.2) [211] conv:(3.99)
46. AgoOfWork=LIV 270 ==> PositionName=Lecturers 225 <conf:(0.83) lift:(1.18) lev:(0.03) [81] conv:(1.75)
47. PositionName=Asst. Prof. AgoOfWork=LIV 213 ==> Count Journal=>WorkType=>Lecturers 177 <conf:(0.83) lift:(2.52) lev:(0.09) [106] conv:(3.86)
48. Count Journal=>WorkType=>Lecturers 562 ==> PositionName=Lecturers 466 <conf:(0.83) lift:(1.18) lev:(0.06) [71] conv:(1.72)
49. Count Journal=>WorkType=>Lecturers AgoOfWork=LIV 209 ==> PositionName=Lecturers 172 <conf:(0.82) lift:(1.17) lev:(0.02) [25] conv:(1.64)
50. WorkType=>Lecturers 622 ==> PositionName=Lecturers 505 <conf:(0.81) lift:(1.16) lev:(0.04) [67] conv:(1.57)
51. WorkType=>Lecturers AgoOfWork=LIV 277 ==> PositionName=Lecturers 193 <conf:(0.81) lift:(1.15) lev:(0.02) [25] conv:(1.54)
52. AgoOfWork=LIV 301 ==> WorkType=>Lecturers 344 <conf:(0.81) lift:(1.47) lev:(0.07) [78] conv:(2.33)
53. Count Journal=>WorkType=>Lecturers AgoOfWork=LIV 281 ==> WorkType=>Lecturers 224 <conf:(0.8) lift:(1.46) lev:(0.04) [71] conv:(2.26)
54. PositionName=Lecturers AgoOfWork=LIV 277 ==> WorkType=>Lecturers 221 <conf:(0.8) lift:(1.45) lev:(0.04) [68] conv:(2.18)
55. Count Journal=>WorkType=>Lecturers AgoOfWork=LIV 242 ==> WorkType=>Lecturers 208 <conf:(0.79) lift:(1.44) lev:(0.06) [63] conv:(2.14)
56. AgoOfWork=LIV 477 ==> Count Journal=>Lecturer WorkType=>Lecturers 371 <conf:(0.78) lift:(2.36) lev:(0.19) [213] conv:(2.89)
57. PositionName=Lecturers AgoOfWork=LIV 236 ==> WorkType=>Lecturers 183 <conf:(0.78) lift:(2.18) lev:(0.09) [99] conv:(2.82)
58. AgoOfWork=LIV 270 ==> Count Journal=>Lecturer WorkType=>Lecturers 209 <conf:(0.77) lift:(1.54) lev:(0.07) [74] conv:(2.18)
59. Count Journal=>WorkType=>Lecturers AgoOfWork=LIV 221 ==> WorkType=>Lecturers 171 <conf:(0.77) lift:(2.17) lev:(0.08) [92] conv:(2.79)
60. PositionName=Lecturers AgoOfWork=LIV 225 ==> Count Journal=>Lecturer WorkType=>Lecturers 172 <conf:(0.76) lift:(1.54) lev:(0.05) [60] conv:(2.09)
61. PositionName=Lecturers AgoOfWork=LIV 277 ==> Count Journal=>Lecturer WorkType=>Lecturers 208 <conf:(0.75) lift:(1.51) lev:(0.04) [70] conv:(1.99)
62. AgoOfWork=LIV 301 ==> Count Journal=>Lecturer WorkType=>Lecturers 226 <conf:(0.75) lift:(1.51) lev:(0.07) [76] conv:(1.99)
63. WorkType=>Lecturers 622 ==> Count Journal=>Lecturer PositionName=Lecturers 466 <conf:(0.75) lift:(1.15) lev:(0.05) [59] conv:(1.37)
64. AgoOfWork=LIV 270 ==> Count Journal=>Lecturer PositionName=Lecturers 202 <conf:(0.75) lift:(1.14) lev:(0.02) [25] conv:(1.35)
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ภาพที่ ข.28 ภาพการวิเคราะห์ข้อมูล Journal โดยใช้โปรแกรม Weka กำหนดค่า Confident 70%

No.	Premises	Conclusion	Confiden... ↓	Support	LaPlace	Gain	p-s	Lift	ConvictL...
40	NoJ, GnLecturer	Lecturer	0.829	0.412	0.943	-0.582	0.063	1.180	1.741
39	NoJ, GnLecturer, LV2	Lecturer	0.823	0.152	0.972	-0.218	0.022	1.171	1.680
38	GnLecturer	Lecturer	0.812	0.447	0.933	-0.654	0.060	1.155	1.581
37	GnLecturer, LV2	Lecturer	0.811	0.171	0.967	-0.250	0.023	1.154	1.573
36	LV1	GnLecturer	0.811	0.216	0.960	-0.317	0.069	1.473	2.374
35	NoJ, LV1	GnLecturer	0.804	0.200	0.961	-0.297	0.063	1.461	2.297
34	Lecturer, LV1	GnLecturer	0.798	0.196	0.960	-0.295	0.061	1.449	2.224
33	NoJ, Lecturer, LV1	GnLecturer	0.794	0.184	0.961	-0.280	0.056	1.442	2.181
32	LV4	NoJ, GoLecturer	0.778	0.328	0.934	-0.516	0.189	2.363	3.019
31	Lecturer, LV4	GoLecturer	0.775	0.162	0.961	-0.256	0.088	2.180	2.869
30	LV2	NoJ, GnLecturer	0.774	0.185	0.956	-0.293	0.066	1.556	2.225
29	NoJ, Lecturer, LV4	GoLecturer	0.774	0.151	0.963	-0.240	0.082	2.175	2.848
28	Lecturer, LV2	NoJ, GnLecturer	0.764	0.152	0.961	-0.246	0.053	1.537	2.134
27	Lecturer, LV1	NoJ, GnLecturer	0.751	0.184	0.951	-0.306	0.062	1.510	2.018
26	LV1	NoJ, GnLecturer	0.751	0.200	0.948	-0.333	0.068	1.510	2.017
25	GnLecturer	NoJ, Lecturer	0.749	0.412	0.911	-0.688	0.052	1.146	1.380
24	LV2	NoJ, Lecturer	0.748	0.179	0.951	-0.299	0.022	1.144	1.374
23	NoJ, LV1	Lecturer, GnLecturer	0.740	0.184	0.948	-0.313	0.073	1.656	2.129
22	LV1	Lecturer, GnLecturer	0.734	0.196	0.944	-0.337	0.077	1.643	2.081
21	Lecturer, LV4	NoJ, GoLecturer	0.725	0.151	0.952	-0.266	0.083	2.201	2.436
20	GnLecturer, LV2	NoJ, Lecturer	0.723	0.152	0.952	-0.269	0.014	1.105	1.248
19	NoJ, Asst. Prof.	LV4	0.722	0.173	0.946	-0.305	0.072	1.711	2.080
18	NoJ, LV2	Lecturer, GnLecturer	0.720	0.152	0.951	-0.271	0.058	1.610	1.973
17	LV2	Lecturer, GnLecturer	0.715	0.171	0.945	-0.307	0.064	1.599	1.939
16	NoJ	Lecturer	0.713	0.654	0.863	-1.180	0.010	1.015	1.037
15	Asst. Prof.	LV4	0.698	0.188	0.936	-0.351	0.075	1.654	1.916
14	LV1	NoJ, Lecturer, GnLecturer	0.691	0.184	0.935	-0.349	0.074	1.676	1.902
13	NoJ, Asst. Prof.	GoLecturer	0.659	0.158	0.934	-0.320	0.073	1.853	1.891
12	NoJ, Asst. Prof.	LV4, GoLecturer	0.656	0.157	0.934	-0.321	0.072	1.847	1.873
11	Asst. Prof.	NoJ, LV4	0.639	0.173	0.923	-0.367	0.067	1.642	1.693
10	LV2	NoJ, Lecturer, GnLecturer	0.637	0.152	0.930	-0.326	0.054	1.545	1.619
9	Lecturer	GnLecturer	0.636	0.447	0.850	-0.958	0.060	1.155	1.235
8	NoJ, Lecturer	GnLecturer	0.631	0.412	0.854	-0.896	0.052	1.146	1.217
7	Asst. Prof.	GoLecturer	0.630	0.170	0.921	-0.370	0.074	1.770	1.739
6	Asst. Prof.	LV4, GoLecturer	0.626	0.169	0.921	-0.371	0.073	1.765	1.726
5	Lecturer	NoJ, GnLecturer	0.587	0.412	0.830	-0.993	0.063	1.180	1.217
4	Asst. Prof.	NoJ, GoLecturer	0.584	0.158	0.911	-0.382	0.069	1.773	1.611
3	Asst. Prof.	NoJ, LV4, GoLecturer	0.580	0.157	0.911	-0.383	0.068	1.768	1.600

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