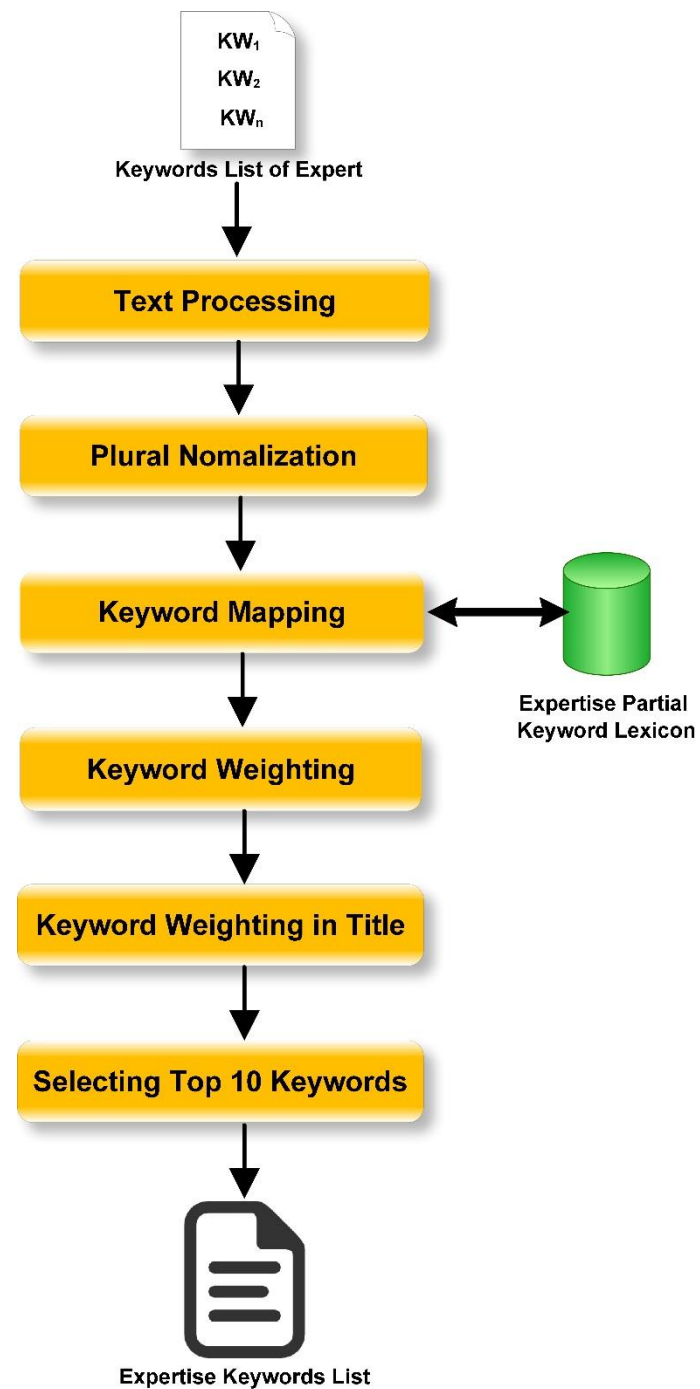


Expertise Keywords Representation Identifying From Scopus Database

Framework Diagram



การสร้างรายการคำเหมือนของความเชี่ยวชาญ

ทำไมต้องสร้างรายการคำเหมือน? เนื่องจาก keywords บางคำที่ผู้แต่งกำหนดไม่สอดคล้องกัน

Author keywords

Technology road map **Technology road mapping**; Technology road maps; Technology roadmap; Technology roadmapping; Technology roadmaps

Indexed keywords

Engineering controlled terms: Computer supported cooperative work; Database systems; Industrial economics; Mining; Mining engineering; Technology

Engineering uncontrolled terms: Analysis results; Bibliometric analysis; Body of knowledge; Conference publications; Current profiling; Electronic databases; Future research; Knowledge evolution; Literature reviews; Portland; Road maps; Social networks; Sustainable economy; Technology managements; Technology road map; Technology road mapping; Technology road maps; Text-mining

Engineering main heading: Industrial management

Author keywords

bibliometric analysis; knowledge evolution **technology roadmapping**; text-mining; TRM; VantagePoint software

Indexed keywords

GEOBASE Subject Index: business; data mining; literature review; project management; technological development

การสร้างรายการคำเหมือนของความเชี่ยวชาญ (cont'd)

Author keywords

K-Nearest Neighbor; Resizing Training Dataset; Sentiment Analysis; Social Media Content; Unbalance Data

Indexed keywords

K-nearest neighbors; Sentiment analysis; Social media; Training dataset; Unbalance Data

Engineering controlled terms: Data mining; Social networking (online); Text processing

Engineering main heading: Software engineering

Author keywords

Classification; Similarity measure; Social media; Text mining; Thai; The nearest neighbor

Indexed keywords

Engineering controlled terms: Classification (of information); Data mining; Feature extraction; Sales; Social networking (online)

Nearest neighbors; Similarity measure; Social media; Text mining; Thai

Engineering main heading: Text processing

การสร้างรายการคำเหมือนของความเชี่ยวชาญ (cont'd)

Keywords from Scopus

natural_language_processing_system, statistical_natural_language_processing,
thai_natural_language_processing, natural_language_processing,
technology_road_mapping, technology_roadmapping, search_engine,
search_engine_tool, d_system, safety_instrumented_system, flow_based_system,
frequency_reuse, frequency_re_use, three_dimensional_modeling
three_dimensional_model, machine_learning_technique, machine_learning_method,
technology_program, information_technology_program, social_network,
social_networking

- ขั้นตอนที่ 1 พิจารณาคำสำคัญที่มีจำนวนคำตั้งแต่ 3 คำ ขึ้นไป
- พิจารณาคำสำคัญที่มีคำปรากฏอยู่ส่วนใดส่วนหนึ่งของกันและกันหรือเป็นคำสำคัญที่มีจำนวนคำปรากฏเรียงต่อเนื่องกันตั้งแต่ 3 คำ ขึ้นไป โดยใช้วิธี Longest Common Subsequence
- เป็นคำสำคัญที่มีจำนวนคำปรากฏเรียงตัวเหมือนกับคำอื่น ๆ 2 คำ โดยต้องปรากฏอยู่ที่ส่วนหน้า (Prefix) เท่านั้น
 - {natural_language_processing_system, statistical_natural_language_processing, thai_natural_language_processing, natural_language_processing}
 - {three_dimensional_modeling, three_dimensional_model}
 - {machine_learning_technique, machine_learning_method}

การสร้างรายการคำเหมือนของความเชี่ยวชาญ (cont'd)

Keywords from Scopus

natural_language_processing_system, statistical_natural_language_processing,
thai_natural_language_processing, natural_language_processing,
technology_road_mapping, technology_roadmapping, search_engine,
search_engine_tool, d_system, safety_instrumented_system, flow_based_system,
frequency_reuse, frequency_re_use, three_dimensional_modeling
three_dimensional_model, machine_learning_technique, machine_learning_method,
technology_program, information_technology_program, social_network,
social_networking

- ขั้นตอนที่ 2 พิจารณาคำสำคัญที่มีจำนวนคำ 2 คำ และต้องไม่มีสัญลักษณ์พิเศษ
- คำสำคัญนั้นต้องไม่ปรากฏอยู่หรือเป็นส่วนใดส่วนหนึ่งคำสำคัญอื่น ๆ ด้วย
- คำสำคัญนั้นต้องปรากฏเรียงต่อเนื่องกันอยู่ที่ส่วนหน้า (Prefix) ของคำสำคัญอื่น ๆ เท่านั้น
 - {technology_road_mapping, technology_roadmapping}
 - {search_engine_tool, search_engine}
 - {frequency_re_use, frequency_reuse}
 - {social_network, social_networking}

การสร้างตัวแทนเอกสารจากผลงานตีพิมพ์ของผู้เชี่ยวชาญเพื่อใช้เป็น



Classifying emotion in Thai youtube comments

Author keywords

Emotion Classification; Emotion Detection; Machine Learning; Text Analysis

Indexed keywords

Engineering controlled terms: Artificial intelligence; Data mining; Decision trees; Embedded systems; Learning systems; Support vector machines; Text processing
Basic emotions; Clip-on; Emotion classification; Emotion detection; Multinomials; Music video; Social media; Text analysis

Engineering main heading: Learning algorithms

KW₁
...
...
...
KW_n

d₁

Effectiveness of social media text classification by utilizing the online news category

Author keywords

keywords extraction; social media; term frequency-inverse document frequency (TF-IDF); Twitter; Word Article Matrix (WAM)

KW₁
...
...
...
KW_n

d₂

A comparison of similarity measures for online social media Thai text classification

Author keywords

Classification; Similarity measure; Social media; Text mining; Thai; The nearest neighbor

Indexed keywords

Engineering controlled terms: Classification (of information); Data mining; Feature extraction; Sales; Social networking (online)
Nearest neighbors; Similarity measure; Social media; Text mining; Thai

Engineering main heading: Text processing

KW₁
...
...
...
KW_n

d_n

Experimental Approach

- **Baseline**
 - Text normalization
 - Stemming (plural normalization)
 - Keyword frequency
- **Approach1**
 - Text normalization
 - Stemming (plural normalization)
 - Keyword weighting (TF-IDF)
- **Approach2**
 - Text normalization
 - Stemming (plural normalization)
 - Keyword weighting (TF-IDF)
 - Keyword mapping with expertise partial keyword lexicon
- **Approach3**
 - Text normalization
 - Stemming (plural normalization)
 - Keyword weighting (TF-IDF)
 - Keyword mapping with expertise partial keyword lexicon
 - Keyword weighting for title

Baseline Approach

Baseline (Term frequency)
technology:6
text_mining:6
industrial_management:5
data_mining:5
information_service:5
natural_language_processing:5
thailand:5
database_system:4
social_networking:4
literature_review:4
computational_linguistic:4
science_citation_index:4
social_network:4
latent_dirichlet_allocation:3
technology_road_map:3
bibliographic_databases:3
expert_finding:3
association_rule_mining:3
natural_language_processing_system:3
bibliographic_data:3
associative_processing:2
sustainable_economy:2
portland:2
technology_road_mapping:2
thai_language:2

Expert#1

Baseline (Term frequency)
data_mining:11
search_engine:11
social_networking:7
information_technology:7
information_retrieval:7
latent_dirichlet_allocation:6
information_service:6
thailand:6
natural_language_processing:6
social_media:6
support_vector_machine:6
search_result:6
text_processing:6
natural_language_processing_system:6
computational_linguistic:5
word_segmentation:5
technology:5
twitter:5
text_mining:5
database_system:4
thai_language:4
machine_learning:4
world_wide_web:4
social_network:4
industrial_management:4

Expert#2

Approach1

- นำวิธี TF-IDF มาประยุกต์ใช้เพื่อกำจัดคำทั่วไปและหาคำที่มีความสำคัญในรายการคำของผู้เชี่ยวชาญแต่ละคน
- นำชื่อเรื่อง (Title) ของ Scopus มาคำนวณ IDF ด้วยเนื่องจากเราต้องการกำจัดคำทั่วไปออกให้มากที่สุด

Approach1 (cont'd)

Expert#1

Gold standard (Human answering)	Baseline (Term frequency)	TF*IDF(Expert keyword)	TF*IDF(Scopus keyword)	TF*IDF(Scopus keyword+title)
Information retrieval	data_mining:11	word_segmentation:0.0289	social_networking:0.137	social_networking:0.1585
search engine	search_engine:11	filtering:0.0287	thai_natural_language_process	thai_natural_language_process
natural language processing	social_networking:7	social_networking:0.0286	filtering:0.0995	data_mining:0.112
Recommender system	information technology:7	thai_natural_language_process	data_mining:0.0971	search_engine:0.095
information_filtering	information retrieval:7	support_vector_machine_svm:0.	search_engine:0.0844	bibliographic_databases:0.0927
text_mining	latent_dirichlet_allocation:6	data_mining:0.021	bibliographic_databases:0.082	filtering:0.0924
sentiment_analysis	information service:6	bibliographic_databases:0.0209	word_segmentation:0.0813	word_segmentation:0.0921
opinion_mining	thailand:6	latent_dirichlet_allocation:0	search_result:0.0782	latent_dirichlet_allocation:0
visualization	natural_language_processing	text_mining:0.0201	latent_dirichlet_allocation:0	digital_library:0.0809
word_segmentation	social media:6	search_engine:0.0185	digital_library:0.0723	search_result:0.0809
data_mining	support_vector_machine:6	thailand:0.0177	text_mining:0.0643	support_vector_machine_svm:0.
social_networking	search_result:6	search_result:0.0177	support_vector_machine_svm:0.	text_mining:0.0725
text_processing	text_processing:6	similarity_measure:0.0172	similarity_measure:0.0604	text_processing:0.0657
machine_learning	natural_language_processing	information retrieval:0.0168	text_processing:0.0571	similarity_measure:0.0641
database_system	computational_linguistic:5	digital_library:0.0164	association_rule_mining:0.055	association_rule_mining:0.060
	word segmentation:5	classification:0.016	twitter:0.0524	information retrieval:0.0585
	technology:5	twitter:0.016	information retrieval:0.0517	learning algorithm:0.0569
	twitter:5	association_rule_mining:0.011	website:0.0502	twitter:0.0562
	text_mining:5	information technology:0.0155	information service:0.0482	information service:0.0547
	database_system:4	technology:0.0155	learning algorithm:0.048	website:0.0546
	thai_language:4	learning algorithm:0.0155	educational_web_content:0.046	computational_linguistic:0.05
	machine_learning:4	text_processing:0.0155	computational_linguistic:0.04	educational_web_content:0.051
	world_wide_web:4	social_network:0.0147	opinion_mining:0.0443	opinion_mining:0.0496
	social_network:4	educational_web_content:0.014	science_citation_index:0.0443	science_citation_index:0.0482
	industrial_management:4	information service:0.0144	machine_learning_algorithm:0.	machine_learning_algorithm:0.
	news_article:4	computational_linguistic:0.01	news_article:0.0397	news_article:0.045
	recommender_system:4	website:0.0144	decision tree:0.0388	decision_tree:0.0444
	similarity_measure:4	decision_tree:0.013	technology:0.0387	information technology:0.0391
	decision_tree:4	artificial_intelligence:0.013	recommender_system:0.0367	expert_finding:0.0386
	collaborative_filtering:4	ontology:0.0128	social_network:0.0361	recommender_system:0.0383
	artificial_intelligence:4	recommender_system:0.0128	expert finding:0.0346	artificial_intelligence:0.037
	machine_learning_algorithm	machine_learning_algorithm:0	sale:0.0338	mean_reciprocal_rank:0.0372
	tokenization:4	feature_selection:0.0128	thai_language:0.0336	event extraction:0.0372

Approach1 (cont'd)

Expert#2

Gold standard (Human answering)	Baseline (Term frequency)	TF*IDF(Expert keyword)	TF*IDF(Scopus keyword)	TF*IDF(Scopus keyword+title)
technology_roadmapping	technology:6	technology_road_mapping:0.0619	technology_road_mapping:0.251	technology_road_mapping:0.2828
bibliographic_database	text_mining:6	thai_natural_language_processing	bibliographic_databases:0.2459	bibliographic_databases:0.2777
social_networking	industrial_management:5	bibliographic_databases:0.0309	social_networking:0.2067	social_networking:0.2404
natural_language_processing	data_mining:5	social_networking:0.0293	thai_natural_language_processing	thai_natural_language_processing:0.2404
text_mining	information_service:5	text_mining:0.0216	bibliometric:0.1407	bibliometric:0.158
industrial_management	natural language processing	literature_review:0.0202	text_mining:0.132	text_mining:0.149
expert_finding	thailand:5	association_rule_mining:0.0202	industrial_management:0.1113	industrial_management:0.128
bibliometric_analysis	database_system:4	science_citation_index:0.0202	science_citation_index:0.1062	science_citation_index:0.1157
association_rule_mining	social_networking:4	industrial_management:0.0186	information_service:0.0962	information_service:0.1093
data_mining	literature_review:4	latent_dirichlet_allocation:0.0186	technology:0.0927	association_rule_mining:0.097
sentiment_analysis	computational_linguistic:4	bibliometric:0.0186	literature_review:0.0888	database_system:0.0946
	science_citation_index:4	expert_finding:0.0186	association_rule_mining:0.088	expert_finding:0.0926
	social_network:4	technology:0.0186	expert_finding:0.083	data_mining:0.0895
	latent_dirichlet_allocation	database_system:0.018	database_system:0.0823	literature_review:0.0874
	technology_road_map:3	data_mining:0.018	data_mining:0.0776	customer_satisfaction:0.085
	bibliographic_databases:3	information_service:0.018	latent_dirichlet_allocation:0.07	latent_dirichlet_allocation:0.084
	expert_finding:3	thailand:0.018	customer_satisfaction:0.0751	computational_linguistic:0.0846
	association_rule_mining:3	computational_linguistic:0.0169	computational_linguistic:0.0734	digital_library:0.0727
	natural_language_processing	customer_satisfaction:0.0169	digital_library:0.065	author_topic_profiling:0.0656
	bibliographic_da:3	author_topic_profiling:0.0163	author_topic_profiling:0.0593	conversational_agent:0.0656
	associative_processing:2	technology_mining:0.0163	technology_mining:0.0593	thai_twitter:0.0656
	sustainable_economy:2	conversational_agent:0.0163	conversational_agent:0.0593	help_desk_system:0.0656
	portland:2	thai_twitter:0.0163	thai_twitter:0.0593	tree_structured_network:0.0656
	technology_road_mapping:2	help_desk_system:0.0163	help_desk_system:0.0593	project_collaboration:0.0617
	thai_language:2	search_result:0.0163	tree_structured_network:0.0593	knowledge_evolution:0.0617
	bibliographic_database:2	tree_structured_network:0.0163	language_understanding:0.0593	opinion_mining:0.0594
	publishing:2	innovation:0.0163	project_collaboration:0.0554	technology_mining:0.0578
	bibliographic_retrieval_sys	language_understanding:0.0163	mining_engineering:0.0554	research_community:0.0578
	technology_mining:2	digital_library:0.0151	knowledge_evolution:0.0554	language_understanding:0.0578
	sale:2	artificial_intelligence:0.0151	public_perception:0.0554	sustainable_economy:0.0566
	project_collaboration:2	research:0.0151	intelligent_information:0.0554	mining_engineering:0.0566
	research_community:2	associative_processing:0.0124	opinion_mining:0.0531	technology:0.0556
	project_management:2	sustainable_economy:0.0124	research:0.052	public_perception:0.0555

Approach2

- เราสมมติฐานว่าถ้าคำสำคัญใดปรากฏอยู่ในชื่อเรื่อง (Title) คำนั้นน่าจะเป็นคำที่สามารถเป็นตัวแทนของความเชี่ยวชาญได้ดี
- เลือกรายการคำสำคัญจาก 10% ของคำทั้งหมด เนื่องจากกลัวว่าจะไปถึงคำที่เป็นคำทั่วไปมาคิดมากเกินไป

$$TF(k, d) = \frac{f(k, d)}{n} \quad (1)$$

$$IDF(k) = \log \frac{|D_{Train}|}{df(k)} \quad (2)$$

$$KWT(k) = 1 + \frac{df'(k)}{\max\{df'(k)\}} \quad (3)$$

$$W(k, d) = TF(k, d) \times IDF(k) \times KWT(k) \quad (4)$$

Keyword Weighting Keyword Weighting in Title

$f(k, d)$	= ความถี่ของคำสำคัญ k ที่อยู่ในเอกสารของผู้เชี่ยวชาญ d
n	= จำนวนคำสำคัญทั้งหมดที่อยู่ในเอกสารของผู้เชี่ยวชาญ
D_{Train}	= จำนวนเอกสารทั้งหมดที่อยู่ใน D_{Train}
$df(k)$	= จำนวนเอกสารที่มีคำสำคัญ k ปรากฏ
$df'(k)$	= จำนวนชื่อเรื่องทั้งหมดของผู้เชี่ยวชาญที่มีคำสำคัญ k ปรากฏ
$\max\{df'(k)\}$	= จำนวนชื่อเรื่องที่มีมากที่สุด

Expert Keyword	$TFIDF$	$f_{k,tt}$	$\max\{f_{k,tt}\}$	$\frac{f_{k,tt}}{\max\{f_{k,tt}\}}$	tff_k	N	$\frac{tff_k}{N}$	$TFIDF \times 1 + \frac{f_{k,tt}}{\max\{f_{k,tt}\}}$	$TFIDF \times 1 + \frac{tff_k}{N}$	
social_networking	0.1915	2	5	0.4000	2	46	0.0435	0.2680	0.1998	0.0683
data_mining	0.1267	2	5	0.4000	2	46	0.0435	0.1774	0.1322	0.0452
thai_natural_language_processing	0.1182	0	5	0.0000	0	46	0.0000	0.1182	0.1182	0.0000
search_engine_tool	0.1170	1	5	0.2000	1	46	0.0217	0.1404	0.1196	0.0209
bibliographic_databas	0.0927	1	5	0.2000	1	46	0.0217	0.1112	0.0947	0.0165
filtering	0.0924	1	5	0.2000	1	46	0.0217	0.1108	0.0944	0.0165
word_segmentation	0.0921	3	5	0.6000	3	46	0.0652	0.1473	0.0981	0.0492
latent_dirichlet_allocation	0.0826	0	5	0.0000	0	46	0.0000	0.0826	0.0826	0.0000
digital_library	0.0809	0	5	0.0000	0	46	0.0000	0.0809	0.0809	0.0000
search_result	0.0809	2	5	0.4000	2	46	0.0435	0.1133	0.0844	0.0288
support_vector_machine_svm	0.0754	0	5	0.0000	0	46	0.0000	0.0754	0.0754	0.0000
text_mining	0.0725	0	5	0.0000	0	46	0.0000	0.0725	0.0725	0.0000
machine_learning	0.0706	0	5	0.0000	0	46	0.0000	0.0706	0.0706	0.0000
association_rule	0.0666	2	5	0.4000	2	46	0.0435	0.0932	0.0695	0.0237
text_processing	0.0657	0	5	0.0000	0	46	0.0000	0.0657	0.0657	0.0000
similarity_measure	0.0641	1	5	0.2000	1	46	0.0217	0.0769	0.0654	0.0114
information_retrieval	0.0585	0	5	0.0000	0	46	0.0000	0.0585	0.0585	0.0000
learning_algorithm	0.0569	0	5	0.0000	0	46	0.0000	0.0569	0.0569	0.0000
twitter	0.0562	5	5	1.0000	5	46	0.1087	0.1125	0.0623	0.0501
information_service	0.0547	0	5	0.0000	0	46	0.0000	0.0547	0.0547	0.0000
website	0.0546	0	5	0.0000	0	46	0.0000	0.0546	0.0546	0.0000
computational_linguistic	0.0529	0	5	0.0000	0	46	0.0000	0.0529	0.0529	0.0000
educational_web_content	0.0515	1	5	0.2000	1	46	0.0217	0.0618	0.0526	0.0092
opinion_mining	0.0496	3	5	0.6000	3	46	0.0652	0.0794	0.0528	0.0265
science_citation_index	0.0482	0	5	0.0000	0	46	0.0000	0.0482	0.0482	0.0000
news_article	0.0450	0	5	0.0000	0	46	0.0000	0.0450	0.0450	0.0000
decision_tree	0.0444	0	5	0.0000	0	46	0.0000	0.0444	0.0444	0.0000
information_technology	0.0391	0	5	0.0000	0	46	0.0000	0.0391	0.0391	0.0000
expert_finding	0.0386	0	5	0.0000	0	46	0.0000	0.0386	0.0386	0.0000
recommender_system	0.0383	3	5	0.6000	3	46	0.0652	0.0613	0.0408	0.0205
artificial_intelligence	0.0374	0	5	0.0000	0	46	0.0000	0.0374	0.0374	0.0000
mean_reciprocal_rank	0.0372	0	5	0.0000	0	46	0.0000	0.0372	0.0372	0.0000
event_extraction	0.0372	2	5	0.4000	2	46	0.0435	0.0521	0.0388	0.0133
feature_selection	0.0360	0	5	0.0000	0	46	0.0000	0.0360	0.0360	0.0000
industrial_management	0.0356	0	5	0.0000	0	46	0.0000	0.0356	0.0356	0.0000
customer_satisfaction	0.0354	0	5	0.0000	0	46	0.0000	0.0354	0.0354	0.0000
sentiment_analysi	0.0354	2	5	0.4000	2	46	0.0435	0.0496	0.0369	0.0126
thai_language	0.0353	0	5	0.0000	0	46	0.0000	0.0353	0.0353	0.0000

Keyword	$TFIDF$	Keyword	$TFIDF \times 1 + \frac{f_{k,tt}}{\max\{f_{k,tt}\}}$	Keyword	$TFIDF \times 1 + \frac{tff_k}{N}$
social_networking	0.1915	social_networking	0.2680	social_networking	0.1998
data_mining	0.1267	data_mining	0.1774	data_mining	0.1322
thai_natural_language_processing	0.1182	word_segmentation	0.1182	search_engine_tool	0.1196
search_engine_tool	0.1170	search_engine_tool	0.1404	thai_natural_language_processing	0.1182
bibliographic_databas	0.0927	thai_natural_language_processing	0.1112	word_segmentation	0.0981
information_filtering	0.0924	search_result	0.1108	bibliographic_databas	0.0947
word_segmentation	0.0921	twitter	0.1473	information_filtering	0.0944
latent_dirichlet_allocation	0.0826	bibliographic_databas	0.0826	search_result	0.0844
digital_library	0.0809	information_filtering	0.0809	latent_dirichlet_allocation	0.0826
search_result	0.0809	association_rule_mining	0.1133	digital_library	0.0809
support_vector_machine_svm	0.0754	latent_dirichlet_allocation	0.0754	support_vector_machine_svm	0.0754
text_mining	0.0725	digital_library	0.0725	text_mining	0.0725
machine_learning	0.0706	opinion_mining	0.0706	machine_learning	0.0706
association_rule_mining	0.0666	similarity_measure	0.0932	association_rule_mining	0.0695
text_processing	0.0657	support_vector_machine_svm	0.0657	text_processing	0.0657
similarity_measure	0.0641	text_mining	0.0769	similarity_measure	0.0654
information_retrieval	0.0585	machine_learning	0.0585	twitter	0.0623
learning_algorithm	0.0569	text_processing	0.0569	information_retrieval	0.0585
twitter	0.0562	educational_web_content	0.1125	learning_algorithm	0.0569
information_service	0.0547	recommender_system	0.0547	information_service	0.0547
website	0.0546	information_retrieval	0.0546	website	0.0546
computational_linguistic	0.0529	learning_algorithm	0.0529	computational_linguistic	0.0529
educational_web_content	0.0515	information_service	0.0618	opinion_mining	0.0528
opinion_mining	0.0496	website	0.0794	educational_web_content	0.0526
science_citation_index	0.0482	computational_linguistic	0.0482	science_citation_index	0.0482
news_article	0.0450	event_extraction	0.0450	news_article	0.0450
decision_tree	0.0444	sentiment_analysi	0.0444	decision_tree	0.0444
information_technology	0.0391	science_citation_index	0.0391	recommender_system	0.0408
expert_finding	0.0386	news_article	0.0386	information_technology	0.0391
recommender_system	0.0383	decision_tree	0.0613	event_extraction	0.0388
artificial_intelligence	0.0374	information_technology	0.0374	expert_finding	0.0386
mean_reciprocal_rank	0.0372	expert_finding	0.0372	artificial_intelligence	0.0374
event_extraction	0.0372	artificial_intelligence	0.0521	mean_reciprocal_rank	0.0372
feature_selection	0.0360	mean_reciprocal_rank	0.0360	sentiment_analysi	0.0369
industrial_management	0.0356	feature_selection	0.0356	feature_selection	0.0360
customer_satisfaction	0.0354	industrial_management	0.0354	industrial_management	0.0356
sentiment_analysi	0.0354	customer_satisfaction	0.0496	customer_satisfaction	0.0354
thai_language	0.0353	thai_language	0.0353	thai_language	0.0353

Expert Keyword	$TFIDF$	$f_{k,tt}$	$\max\{f_{k,tt}\}$	$\frac{f_{k,tt}}{\max\{f_{k,tt}\}}$	ttf_k	N	$\frac{ttf_k}{N}$	$TFIDF \times 1 + \frac{f_{k,tt}}{\max\{f_{k,tt}\}}$	$TFIDF \times 1 + \frac{ttf_k}{N}$	
technology_road_mapping	0.2828	2	3	0.6667	2	18	0.1111	0.4714	0.3143	0.1571
bibliographic_databas	0.2777	2	3	0.6667	2	18	0.1111	0.4628	0.3086	0.1543
social_networking	0.2404	2	3	0.6667	2	18	0.1111	0.4007	0.2671	0.1336
thai_natural_language_process	0.1962	0	3	0.0000	0	18	0.0000	0.1962	0.1962	0.0000
data_mining	0.1787	1	3	0.3333	1	18	0.0556	0.2382	0.1886	0.0496
bibliometric	0.1580	3	3	1.0000	3	18	0.1667	0.3160	0.1843	0.1317
text_mining	0.1490	1	3	0.3333	1	18	0.0556	0.1987	0.1573	0.0414
industrial_management	0.1280	0	3	0.0000	0	18	0.0000	0.1280	0.1280	0.0000
science_citation_index	0.1157	0	3	0.0000	0	18	0.0000	0.1157	0.1157	0.0000
association_rule_mining	0.1140	1	3	0.3333	1	18	0.0556	0.1520	0.1203	0.0317
information_service	0.1093	0	3	0.0000	0	18	0.0000	0.1093	0.1093	0.0000
database_system	0.0946	0	3	0.0000	0	18	0.0000	0.0946	0.0946	0.0000
expert_finding	0.0926	0	3	0.0000	0	18	0.0000	0.0926	0.0926	0.0000
literature_review	0.0874	1	3	0.3333	1	18	0.0556	0.1166	0.0923	0.0243
customer_satisfaction	0.0850	0	3	0.0000	0	18	0.0000	0.0850	0.0850	0.0000
latent_dirichlet_allocation	0.0849	0	3	0.0000	0	18	0.0000	0.0849	0.0849	0.0000
computational_linguistic	0.0846	0	3	0.0000	0	18	0.0000	0.0846	0.0846	0.0000
digital_library	0.0727	0	3	0.0000	0	18	0.0000	0.0727	0.0727	0.0000
author_topic_profiling	0.0656	0	3	0.0000	0	18	0.0000	0.0656	0.0656	0.0000
thai_twitter	0.0656	1	3	0.3333	1	18	0.0556	0.0875	0.0693	0.0182
conversational_agent	0.0656	1	3	0.3333	1	18	0.0556	0.0875	0.0693	0.0182
help_desk_system	0.0656	1	3	0.3333	1	18	0.0556	0.0875	0.0693	0.0182

Keyword	$TFIDF$	Keyword	$TFIDF \times 1 + \frac{f_{k,tt}}{\max\{f_{k,tt}\}}$	Keyword	$TFIDF \times 1 + \frac{ttf_k}{N}$
technology_road_mapping	0.2828	technology_road_mapping	0.4714	technology_road_mappin	0.3143
bibliographic_databas	0.2777	bibliographic_databas	0.4628	bibliographic_databas	0.3086
social_networking	0.2404	social_networking	0.4007	social_networking	0.2671
thai_natural_language_processin	0.1962	bibliometric	0.3160	thai_natural_language_p	0.1962
data_mining	0.1787	data_mining	0.2382	data_mining	0.1886
bibliometric	0.1580	text_mining	0.1987	bibliometric	0.1843
text_mining	0.1490	thai_natural_language_proces	0.1962	text_mining	0.1573
industrial_management	0.1280	association_rule_mining	0.1520	industrial_management	0.1280
science_citation_index	0.1157	industrial_management	0.1280	association_rule_mining	0.1203
association_rule_mining	0.1140	literature_review	0.1166	science_citation_index	0.1157
information_service	0.1093	science_citation_index	0.1157	information_service	0.1093
database_system	0.0946	information_service	0.1093	database_system	0.0946
expert_finding	0.0926	database_system	0.0946	expert_finding	0.0926
literature_review	0.0874	expert_finding	0.0926	literature_review	0.0923
customer_satisfaction	0.0850	thai_twitter	0.0875	customer_satisfaction	0.0850
latent_dirichlet_allocation	0.0849	conversational_agent	0.0875	latent_dirichlet_allocatio	0.0849
computational_linguistic	0.0846	help_desk_system	0.0875	computational_linguistic	0.0846
digital_library	0.0727	customer_satisfaction	0.0850	digital_library	0.0727
author_topic_profiling	0.0656	latent_dirichlet_allocation	0.0849	thai_twitter	0.0693
thai_twitter	0.0656	computational_linguistic	0.0846	conversational_agent	0.0693
conversational_agent	0.0656	digital_library	0.0727	help_desk_system	0.0693
help_desk_system	0.0656	author_topic_profiling	0.0656	author_topic_profiling	0.0656

แบบสำรวจความเชี่ยวชาญของนักวิจัย (โครงการ Expert Finder)

เนื่องจากทางทีมวิจัยห้องปฏิบัติการวิจัยเทคโนโลยีเสียง ศูนย์เทคโนโลยีอิเล็กทรอนิกส์และคอมพิวเตอร์แห่งชาติ ได้ศึกษาวิจัยเกี่ยวกับวิธีการหาความเชี่ยวชาญของนักวิจัย โดยใช้ข้อมูลจาก Scopus ซึ่งเป็นแหล่งจัดเก็บบทความและวารสารวิชาการ ทางทีมจึงขอความร่วมมือจากท่าน ช่วยเลือกหัวข้อความเชี่ยวชาญที่ตรงกับท่าน เพื่อนำมาใช้ในการประเมินประสิทธิภาพของระบบภายใต้โครงการ Expert Finder

โปรดเลือกหัวข้อความเชี่ยวชาญที่ตรงกับท่าน โดยคลิกที่กล่องหัวข้อความเชี่ยวชาญที่ต้องการ หากต้องการยกเลิกให้คลิกซ้ำอีกครั้ง (สามารถเลือกได้มากกว่า 1 รายการ)

Leuconostoc	Port Scans	Brachiosphaera	Glycerol Hydrogenolysis
Biochemical Methane Potential	Artocarpus Rigidus Extract	Kaempferia Parviflora	Organic Electronics
Visualization Toolkits	Feedback System	Different Stages	Kinase Domains
Suwari	High Permittivity Dielectrics	Metallorganic Chemical Vapor Deposition	Phenethyl Alcohol Hydracrylate
Colloids	Abruquinone G	Azaphilone Pigments	Electronic Medical Equipment
Apparent Viscosity	Three Electrode	Information Sharing	Absorption Layer
Quality Of Speech	Electric Fault Currents	Arabidopsis Protein	Fundamental Frequency (F0)
Bensingtonia Naganoensis	Van Der Hoven Spectrum	Anterior Chamber Angles	Rats, Sprague-Dawley
Anion Exchanger-1 (AE1)	Currents And Voltages	Protein Delivery	Weight Fractions
Natural Lighting	Sol-gel Synthesis	CuO Nanoparticles	Downdraft Gasifier
Chemical Bonds	Al Electrodes	Oryza Meridionalis	Nonstructural Protein-1
Underflow Concentration	Software Packages	Alumina Particles	Prototype System
Coreshell Polymers	Hemoglobin H	Proteolytic Activity	Formaldehyde
Catalyst Performance	Aerospace Engineering	Calculating Aid Tools	Eutectics
Deoxyguanosine Phosphate	Adaptive Digital Filters	Giant Permittivity	Multicasting

หัวข้อความเชี่ยวชาญที่ท่านเลือก

ส่งแบบสำรวจ