Supplementary file

Contents

Supplementary Table 1. EMBASE search strategy (search timeline: 1974 to 2024 July 03)

#	Searches	Results
1	(AI or "artificial intelligence").ti,ab.	104975
2	automation.ti,ab.	26214
3	(DeepAI or "deep learning").ti,ab.	66742
4	(genAI or "generative model*").ti,ab.	2913
5	"natural language process*".ti,ab.	9836
6	"machine learning".ti,ab.	121374
7	or/1-6	292992
8	(systematic* adj3 review*).ti,ab.	437495
9	(search or screening or "data extraction*" or "data abstraction*" or "risk of bias" or "quality assessment*" or "quality appraisal*" or "critical appraisal*").ti,ab.	1613722
10	("data synthes*" or "evidence synthes*").ti,ab.	26989
11	(met analy* or metanaly* or "technology assessment*" or HTA or HTAs or "technology overview*" or "technology appraisal*").ti,ab.	20819
12	(comparative adj3 (efficacy or effectiveness)).ti,ab.	26936
13	((indirect or indirect treatment or mixed-treatment or bayesian) adj3 comparison*).ti,ab.	8010
14	"economic model*".ti,ab.	6942
15	(cost* adj2 (effective* or utilit* or benefit* or minimi* or analy* or outcome or outcomes)).ti,ab.	324539
16	or/8-15	2163151
17	(animal* not human*).sh,hw.	4976820
18	(book or chapter or conference review or editorial or erratum or letter or note or short survey or tombstone).pt.	3908129
19	case report/ or case report.ti.	3040141
20	or/17-19	11472400
21	7 and 16	36113
22	21 not 20	34115
23	limit 22 to english language	33417
24	limit 23 to yr="2023 - current"	11313

Supplementary Table 2. Free text terms used in the included search filters

Search Terms	ISSG Filter	Donevа_2024	Santos_2023	Yao_2024	Toth_2024_Abdelkader	Toth_2024_Jonnaladda	Toth_2024_O'Mara	Toth_2024_van Dinter	de la torre-lopez_2023	Schmidt 2023a	Schmidt 2023b
(('text mining' OR 'data-mining') NEXT/3 (tool* OR technique* OR system))		1									
((multifactor* or multicriteria) adj3 ("decision analysis" or "decision making"))	1										
(('support vector' NEXT/1 (machine* OR classif* OR network OR regression))		1									
(Markov adj3 model*)	1										
decision tree	1										
Runway AI	1										
text mine*											1
textmin*										1	1
(((deep OR comput* OR model* OR convolutional OR artificial OR algorithmic OR connectionist OR mathematical) NEXT/1 'neural network*')		1									
(((text*[TIAB] OR sequence[TIAB]) AND classif*[TIAB]) NOT ((RNA OR nucleotide OR DNA OR protein) AND sequence))											1
((active or deep or supervised or semi-supervised or transfer or unsupervised) adj learning)										1	
((artificial or deep) adj neural network?)										1	
((automated NEXT/3 (tool* OR technique* OR system OR 'pattern recognition' OR analyz* OR analys* OR extract* OR screen* OR evaluat* OR classif*))		1									
((connectionist NEXT/1 (model OR network))		1									
((data or literature or text) adj1 (mine? Or mining))										1	
((knowledge base or knowledgebase) and (expert or databases))										1	
((ontolog*[TIAB] OR "knowledge base"[TIAB] OR knowledgebase[TIAB] or knowledge-base[TIAB]) AND (expert[TIAB] OR database[TIAB]))											1
((reference* OR literature OR data OR text* OR record* OR article* OR paper* OR post* OR tweet*) AND (retriev* OR search* OR download))											1
((text* adj1 analys*)										1	
((text* or sequence?) adj1 classif*)										1	

(ann NEXT/3 (analysis OR approach OR method* OR model* OR output OR technique* OR training*))		1									
(bidirectional encoder representations adj2 transformer?)										1	
(classify* AND text)							1				
(machine NEXT/1 (intelligence OR learning))		1									
(word adj3 frequency adj3 analys*)										1	
active learning							1				1
ai	1	1									
AIVI	1										
al				1							
ALBERT											1
artificial intelligence	1	1	1	1						1	1
Automat$				1							
automate									1		
automated							1	1	1	1	
automated extraction											1
automated review									1		
automates								1			
automatic								1	1		
Automatic extraction											1
automatically						1					
automating							1	1		1	
automating extraction											1
automation		1					1	1	1	1	
BERT										1	1
Bidirectional Encoder Representations											1
bi-LSTM										1	1
Bing chat	1										
BIOBERT											1
character embedding											1
Chat GPT	1										
ChatGPT*	1										
classification						1					
classification algorithm*	1										
clustering tool							1			1	
CNN										1	1
computer heuristic*	1										
conditional random field?										1	1
convolutional network*	1										
convulutional neural network?										1	1

CRF										1	1
DALL-E	1										
data extraction				1							1
data mine*											1
data mining					1		1				
data science	1										
data-extraction											1
datamin*										1	1
decision making	1										
decision support system*	1										
decision tree?										1	1
deep learning	1		1								1
DeepAI	1										
deision analysis	1										
detection						1					
DistilBERT											1
document cluster*										1	
extracting						1					
extraction						1					
feature detection	1										
Finding						1					
generative pre-trained transformer	1										
generative pretrained transformer"	1										
genetic algorithm										1	
Google* Bard	1										
Google* Gemini	1										
IBM Watson	1										
identification						1					
identify sections						1					
identifying						1					
inference algorithm											1
inference algorithms											1
Inferring						1					
Information retrieval											1
Interpreting						1					
Invideo	1										
kLog											1
language learning model*	1										
large language model*	1										
latent dirichlet allocation										1	1

learning algorithm*	1									1	1
learning approach						1					
literature mine*											1
literature mining					1		1				
long short-term memory										1	1
LSTM										1	1
machine learn*										1	1
machine learning	1		1	1	1		1				
MaxEnt										1	1
Max-Ent										1	1
maximum entropy classifier										1	1
Microsoft* Bing	1										
Microsoft* Copilot"	1										
Midjourney	1										
mining								1			
ml				1							
multi-layer perceptron										1	1
n?ive bayes											1
naïve bayes										1	
named entity recognition										1	
natural language process*	1										
natural language processing		1	1		1		1			1	
nearest neighbo*	1										
neural network			1								1
neural network*	1										
neural networks					1						1
NLP										1	1
ontologies										1	
ontology										1	
Open AI	1										
OpenAI	1										
outlier detection	1										
Path AI	1										
PathAI	1										
pattern recognition	1										
perceptron algorithm											1
Perplexity	1										
predictive modelling										1	1
probability tree	1										
question answering											1

question answering										1	
radial basis function											1
radial basis function network										1	
random forest	1									1	1
RBFN										1	1
reading comprehension										1	
reading comprehension											1
recurrent neural network*											1
recurrent neural network?										1	
regex										1	1
regular expression										1	1
representation learning"	1										
RNN										1	1
RoBERTa											1
rule based learning										1	1
rule-base											1
Runway Gen-1	1										
SCIBERT											1
semi automation		1					1				
semi-automated							1			1	
semi-automating										1	
semi-automation										1	
semi-supervised learning											1
SpanBERT											1
Stable Diffusion	1										
statistical relational learning											1
statistical relational learning-based approach											1
summarization						1					
supervised classification											1
supervised learning											1
support vector machine					1		1				1
support vector machine*	1										
support vector machine?										1	
SVM							1			1	1
term recognition							1			1	1
text analys*											1
text analysis					1		1				
text categorization					1		1				
text categorizer							1				
text classification					1		1				

text classifier							1				
text cluster*										1	
text clustering							1				
text clusters							1				
text mining				1	1		1				
textual analysis							1				
topic model											1
topic model*										1	
transfer learning	1										1
Transformer-XL											1
unsupervised classification											1
un-supervised classification											1
unsupervised learning											1
word embedding											1
word frequency analysis							1				
word2vec											1
XLNet											1

Supplementary Table 3. Search Concepts and Associated Terms used in the search filters

Automation	ISSG Filter	Doneva_2024	Santos_2023	Yao_2024	Toth_2024_Abdelkader	Toth_2024_Jonnalagadda	Toth_2024_O'Mara	Toth_2024_van Dinter	de la torre-lopez_2023	schmidt 2023b	schmidt 2023B
automat$				1							
automate									1		
automated							1	1	1	1	
automated review									1		
automated [MH]											1
automates								1			
automatic								1	1		
automatically					1						
automating							1	1		1	
automating [MH]											1
automation		1					1	1	1	1	
automation/										1	
automation[MH]											1
Semi-automation	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
semi automation		1					1				
semi-automated							1			1	
semi-automated [MH]											1

semi-automating										1	
semi-automating [MH]											1
semi-automation										1	
semi-automation[MH]											1
Artificial intelligence	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
ai	1	1									
artificial intelligence	1	1	1	1						1	1
artificial intelligence/	1									1	1
artificial intelligence/de		1									
artificial intelligence [MH]		-									1
Machine learning (general terms)	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
(machine NEXT/1 (intelligence OR learning))		1									
machine learn*										1	1
machine learn*[MH]											1

machine learning	1		1	1	1		1				
machine learning/	1									1	1
machine learning/de		1									
ml				1							
supervised machine learning/										1	1
unsupervised machine learning/		-								1	1
Machine learning approaches	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
active learning							1				1
conditional random field?										1	1
CRF										1	1
genetic algorithm										1	
language learning model*	1										
large language model*	1										
learning algorithm*	1									1	1
learning algorithm* [MH]											1
learning approach						1					

n?ive bayes											1
naïve bayes										1	
nearest neighbo*	1										
predictive modelling										1	1
predictive modelling[MH]											1
probability tree	1										
representation learning	1										
rule based learning										1	1
rule-base											1
semi-supervised learning											1
statistical relational learning											1
statistical relational learning-based approach											1
supervised learning											1
transfer learning	1										1
Natural language processing	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
natural language process*	1										

natural language processing		1	1		1		1			1	
natural language processing/		1								1	1
natural Language Processing[MH]											1
NLP										1	1
Mining	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
((('text mining' OR 'data-mining') NEXT/3 (tool* OR technique* OR system))		1									
((data or literature or text) adj1 (mine? Or mining))										1	
data mine*											1
data mining					1		1				
data mining/										1	1
data mining[MH]											1
datamin*										1	1

literature mine*											1
literature mining					1		1				
literature mining[MH]											1
mining								1			
text mine*											1
text mining				1	1		1				
text mining[MH]											1
textmin*										1	1
Text grouping	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
text categorization					1		1				
text categorizer							1				
text classification					1		1				
text classifier							1				
(classify* AND text)							1				
classification						1					
classification algorithm*	1										
unsupervised classification											1

un-supervised classification											1
(((text*[TIAB] OR sequence[TIAB]) AND classif*[TIAB]) NOT ((RNA OR nucleotide OR DNA OR protein) AND sequence))											1
((text* or sequence?) adj1 classif*)											
text clusters							1				
text cluster*										1	
text clustering							1				
clustering tool							1			1	
topic model											1
topic model*										1	
Text analysis	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
((text* adj1 analys*)										1	
(word adj3 frequency adj3 analys*)										1	

text analysis					1		1				
textual analysis							1				
word frequency analysis							1				
Deep learning	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
(((deep OR comput* OR model* OR convolutional OR artificial OR algorithmic OR connectionist OR mathematical) NEXT/1 'neural network*')		1									
((active or deep or supervised or semi-supervised or transfer or unsupervised) adj learning)										1	
bi-LSTM										1	1
deep learning	1		1								1
deep learning/	1									1	1

DeepAI	1										
long short-term memory										1	1
LSTM										1	1
multi-layer perceptron										1	1
radial basis function network										1	
Transformer-XL											1
Neural network	ISSG Filter	Doneva_2024	Santos_2023	Yao_2024	Toth_2024_Abdelkader	Toth_2024_Jonnalagdda	Toth_2024_O'Mara	Toth_2024_van Dinter	de la torre-lopez_2023	schmidt 2023b	schmidt 2023B
(((deep OR comput* OR model* OR convolutional OR artificial OR algorithmic OR connectionist OR mathematical) NEXT/1 'neural network*')		1									
artificial neural network/		1									
Bidirectional Encoder Representations											1

CNN										1	1
convolutional network*	1										
convulutional neural network?										1	1
neural network			1								1
neural network*	1										
neural networks					1						1
neural networks (computer) /										1	
neural networks/											1
random forest	1									1	1
recurrent neural network*											1
recurrent neural network?										1	
RNN										1	1
RoBERTa											1
word2vec											1
Support vector machine	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
(('support vector' NEXT/1 (machine* OR classif*		1									

OR network OR regression))											
support vector machine					1		1				1
support vector machine*	1										
support vector machine/		1								1	
support vector machine?										1	
SVM							1			1	1
Knowledge systems	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
((knowledge base or knowledge base) and (expert or databases))										1	
((ontolog*[TIAB] OR "knowledge base"[TIAB] OR knowledge base[TIAB] or knowledge-base[TIAB]) AND											1

(expert[TIAB] OR database[TIAB]))											
knowledge bases/										1	
ontologies										1	
ontology										1	
Decision support systems	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
((multifactor* or multicriteria) adj3 ("decision analysis" or "decision making"))	1	1									
decision tree	1										
decision analysis	1										
decision making	1										
decision support system*	1										
decision tree?										1	1
decision trees/										1	
Identification, interpretation and pattern	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**

recognition											
automated pattern recognition '/exp		1									
feature detection	1										
identification						1					
identify sections						1					
identifying						1					
inference algorithm											1
inference algorithms											1
inferring						1					
interpreting						1					
pattern recognition	1										
reading comprehension										1	1
summarization						1					
term recognition							1			1	1
Extraction	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
automated extraction											1
automatic extraction											1
automating extraction											1

data extraction				1							1
data-extraction											1
extracting						1					
extraction						1					
AI models and applications	**ISSG Filter**	**Doneva_2024**	**Santos_2023**	**Yao_2024**	**Toth_2024_Abdelkader**	**Toth_2024_Jonnalagdda**	**Toth_2024_O'Mara**	**Toth_2024_van Dinter**	**de la torre-lopez_2023**	**schmidt 2023b**	**schmidt 2023B**
ALBERT											1
BERT										1	1
Bing chat	1										
BIOBERT											1
Chat GPT	1										
ChatGPT*	1										
DALL-E	1										
DistilBERT											1
Google* Bard	1										
Google* Gemini	1										
IBM Watson	1										
Invideo	1										
Microsoft* Bing	1										
Microsoft* Copilot	1										
Midjourney	1										
Open AI	1										

OpenAI	1										
Path AI	1										
PathAI	1										
PathAI	1										
Runway AI	1										
Runway Gen-1	1										
SCIBERT											1
SpanBERT											1
Stable Diffusion	1										
Transformer-XL											1
XLNet											1

Supplementary Table 4. PRESS checklist assessment of included search filters

Questions	ISSG Filter	Doneva_2024	Santos_2023	Yao_2024	Toth_2024_Abdelkader	Toth_2024_Jonnalagdda	Toth_2024_O'Mara	Toth_2024_van Dinter	de la torre-lopez_2023	schmidt 2023b	schmidt 2023B
Does the search strategy match the research question/PICO?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are the search concepts clear?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are there too many or too few PICO elements included?	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate	Appropriate
Are the search concepts too narrow or too broad?	No	No	No	Too narrow	Too narrow	Too narrow	Too narrow	Too narrow	Too narrow	No	No
Does the search retrieve too many or too few records? (Please show number of hits per line.)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Are unconventional or complex strategies explained?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Are Boolean or proximity operators used correctly?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Is the use of nesting with brackets appropriate and effective for the search?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
If NOT is used, is this likely to result in any unintended exclusions?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Could precision be improved by using proximity operators (e.g., adjacent, near, within) or phrase-searching instead of AND?	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Is the width of proximity operators suitable (e.g., might adj5 pick up more variants than adj2)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Are the subject headings relevant?	Yes	Yes	Yes	not used	Not used	Not used	Not used	Not used	Not used	Yes	Yes

Are any relevant subject headings missing; e.g., previous index terms?	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Are any subject headings too broad or too narrow?	Appropriate	Appropriate	Appropriate	Not used	Not used	Not used	Not used	Not used	Not used	Appropriate	Appropriate
Are subject headings exploded where necessary and vice versa?	Yes	Yes	Yes	Not used	Not used	Not used	Not used	Not used	Not used	Yes	Yes
Are major headings ("starring" or restrict to focus) used? If so, is there adequate justification?	Yes	Yes	Yes	Not used	Not used	Not used	Not used	Not used	Not used	Yes	Yes
Are subheadings missing?	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Are subheadings attached to subject headings? (Floating subheadings may be preferred.)	Yes	Yes	Yes	Not used	Not used	Not used	Not used	Not used	Not used	Yes	Yes
Are floating subheadings relevant and	Yes	Yes	Yes	Not used	Not used	Not used	Not used	Not used	Not used	Yes	Yes

used appropriately?											
Are both subject headings and terms in free text (see below) used for each concept?	No	No	No	Not used	Not used	Not used	Not used	Not used	Not used	No	No
Does the search include all spelling variants in free text (e.g., UK versus US spelling)?	Yes	Yes	Yes	No	No	No	No	No	No	Yes	Yes
Does the search include all synonyms or antonyms (e.g., opposites)?	Yes	Yes	Yes	No	No	No	No	No	No	Yes	Yes
Does the search capture relevant truncation (i.e., is truncation at the correct place)?	Yes	Yes	No	Yes	No	No	No	No	No	Yes	Yes
Is the truncation too broad or too narrow?	Relevant	Relevant	Not used	Relevant	Not used	Not used	Not used	Not used	Not used	Relevant	Relevant
Are acronyms or abbreviations used appropriately? Do they capture	Yes	Yes	Yes	No	No	No	No	No	No	Yes	Yes

irrelevant material? Are the full terms also included?											
Are the keywords specific enough or too broad? Are too many or too few keywords used? Are stop words used?	Relevant	Relevant	Relevant	Few keywords	Few keywords	Few keywords	Few keywords	Few keywords	Few keywords	Relevant	Relevant
Have the appropriate fields been searched; e.g., is the choice of the text word fields (.tw.) or all fields (.af.) appropriate? Are there any other fields to be included or excluded (databasespecific)?	Yes	Yes	Yes	No	No	No	No	No	No	Yes	Yes
Should any long strings be broken into several shorter search statements?	No	No	No	Yes	Yes	Yes	Yes	Yes	Yes	No	No
Are there any spelling errors?	No	No	No	No	No	No	No	No	No	No	No
Are there any errors in system syntax;	No	No	No	No	No	No	No	No	No	No	No

e.g., the use of a truncation symbol from a different search interface?											
Are there incorrect line combinations or orphan lines (i.e., lines that are not referred to in the final summation that could indicate an error in an AND or OR statement)?	No	No	No	No	No	No	No	No	No	No	No
Are all limits and filters used appropriately and are they relevant given the research question?	Yes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Are all limits and filters used appropriately and are they relevant for the database?	Yes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Are any potentially helpful limits or filters missing? Are the limits or filters too	No	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

broad or too narrow? Can any limits or filters be added or taken away?											
Are sources cited for the filters used?	Yes	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Abbreviations: NA, Not applicable; PRESS, Peer Review of Electronic Search Strategies

Supplementary Table 5. Mapping framework of the included reviews or search filters to HEOR-relevant tasks

Included Filter / Review	Primary Focus	Relevant Automation or AI Concepts (from Tables 2–3)	HEOR-Relevant Task(s)	HEOR Applicability (Y/N)	Basis for HEOR Applicability
ISSG Filter	Comprehensive automation and AI terms; validated PRESS checklist	AI, NLP, ML, automation, data extraction, decision support systems	SLR automation for evidence synthesis; search optimization in HTA/ITC contexts	Y	Designed for broad SLR automation, relevant for HEOR workflows requiring high-volume evidence retrieval and screening (e.g., HTA submissions, ITCs).
Doneva 2024	Automation in SLRs	Machine learning, data mining, NLP	Semi-automated screening and data extraction for model input evidence	Y	Enables efficiency in evidence generation for cost-effectiveness and model parameter sourcing.
Santos 2023	AI text mining and ML for review automation	Deep learning, text mining, NLP	Data extraction and synthesis for economic models	Y	Focus on NLP-based extraction aligns with HEOR model input curation and parameter updating.
Yao 2024	Automation and ML applications	Neural networks, supervised learning	Evidence classification and prioritization	Partial (Y)	Useful for classifying economic and clinical evidence; limited focus on cost/QoL data.
Toth 2024 (Abdelkader)	Semi-automation and AI integration	Automation, data mining	Screening automation in reviews	Partial (Y)	Applicable for HEOR evidence identification; not fully validated for model-based evidence synthesis.
Toth 2024 (Jonnalagadda)	Text and data mining	NLP, clustering, pattern recognition	Evidence deduplication and abstract screening	Y	Supports automation of evidence synthesis phases relevant to SLRs for HTA.
Toth 2024 (O'Mara)	AI-enhanced evidence extraction	Text mining, NLP, extraction algorithms	Data abstraction for HEOR models	Y	Directly supports HEOR-focused evidence abstraction (clinical and economic).
Toth 2024 (van Dinter)	Semi-automation for systematic reviews	Machine learning	Review process optimization	Partial (Y)	Applicable for initial evidence identification; limited cost-effectiveness focus.
de la Torre-Lopez 2023	Ontologies and expert systems	Knowledge bases, ontologies, decision support	Decision modeling and expert rule-based HTA logic	Y	Strong alignment with structured decision models used in HTA and CEA.
Schmidt 2023a/b	Deep learning and LLM approaches	BERT, GPT, NLP	Full-text screening and semantic extraction	Y	Enables AI-assisted identification of clinical/economic endpoints and model inputs.

Abbreviations: AI, Artificial Intelligence; BERT, Bidirectional Encoder Representations from Transformers; CEA, Cost-Effectiveness Analysis; HEOR, Health Economics and Outcomes Research; HTA, Health Technology Assessment; ISSG, Information Specialists' Sub-Group; ITC, Indirect Treatment Comparison; LLM, Large Language Model; ML, Machine Learning; NLP, Natural Language Processing; PRESS, Peer Review of Electronic Search Strategies; QoL, Quality of Life; SLR, Systematic Literature Review.