Supplement Appendix 1: Literature search of selected databases

PubMed

1	("Machine learn*"[tiab] OR "Machine Intelligen*"[tiab] OR "Computer Reason*"[tiab] OR "artificial intelligen*"[tiab] OR "artificial intelligence"[Mesh] OR "supervised learn*"[tiab] OR "unsupervised learn*"[tiab] OR "machine learn*"[tiab] OR "reinforcement learn*"[tiab] OR "neural network*"[tiab] OR "neural networks, computer"[Mesh] OR "deep learn*"[tiab] OR "random forest*"[tiab] OR "support vector machine*"[tiab] OR "ensemble learn*"[tiab] OR "transfer learn*"[tiab] OR "hierarchical learn*"[tiab] OR "data mining"[Mesh])	255,922
2	(Deliri*[tiab] OR Confusion[Mesh])	25,756
3	1 AND 2	126

EMBASE

1	("Machine learn*":ti,ab OR "Machine Intelligen*":ti,ab OR "Computer Reason*":ti,ab OR "artificial intelligen*":ti,ab OR "artificial intelligence"/exp OR "machine learning"/exp OR "unsupervised learn*":ti,ab OR "machine learn*":ti,ab OR "reinforcement learn*":ti,ab OR "neural network*":ti,ab OR "deep learn*":ti,ab OR "random forest*":ti,ab OR "support vector machine*":ti,ab OR "ensemble learn*":ti,ab OR "transfer learn*":ti,ab OR "hierarchical learn*":ti,ab)	383,891
2	("Deliri*":ti,ab OR "delirium"/exp)	43,269
3	1 AND 2	193

Scopus

1	(TITLE-ABS-KEY ("Machine learn*" OR "Machine Intelligen*" OR "Computer Reason*" OR "artificial intelligen*" OR "supervised learn*" OR "unsupervised learn*" OR "reinforcement learn*" OR "neural network*" OR "deep learn*" OR "random forest*" OR "support vector machine*" OR "ensemble learn*" OR "transfer learn*" OR "hierarchical learn*"))	1,542,627
2	(TITLE-ABS-KEY(" Deliri*"))	44,445
3	1 AND 2	154

CINAHL

1	(((TI "Machine learn*" OR AB "Machine learn*") OR (TI "Machine Intelligen*" OR AB "Machine Intelligen*") OR (TI "Computer Reason*" OR AB "Computer Reason*") OR (TI	24,208

	"artificial intelligen*" OR AB "artificial intelligen*") OR (TI "supervised learn*" OR AB "supervised learn*") OR (TI "unsupervised learn*" OR AB "unsupervised learn*") OR (TI "machine learn*" OR AB "machine learn*") OR (TI "reinforcement learn*" OR AB "reinforcement learn*") OR (TI "neural network*" OR AB "neural network*") OR (TI "deep learn*" OR AB "deep learn*") OR (TI "random forest*" OR AB "random forest*") OR (TI "support vector machine*" OR AB "support vector machine*") OR (TI "ensemble learn*" OR AB "ensemble learn*") OR (TI "transfer learn*" OR AB "transfer learn*") OR (TI "hierarchical learn*" OR AB "hierarchical learn*"))	
2	(MH "Artificial Intelligence+")	24,657
3	(MH "Data Mining+")	4,128
4	(TI Deliri* OR AB Deliri*)	9,876
5	(MH "Delirium+")	7,778
6	#1 OR #2 OR #3	42,979
7	#4 OR #5	11,425
8	6 AND 7	58

PsycInfo

1	(**Any Field:** "Machine learn*" OR **Any Field:** "Machine Intelligen*" OR **Any Field:** "Computer Reason*" OR **Any Field:** "artificial intelligen*" OR **Any Field:** "supervised learn*" OR **Any Field:** "unsupervised learn*" OR **Any Field:** "machine learn*" OR **Any Field:** "reinforcement learn*" OR **Any Field:** "neural network*" OR **Any Field:** "deep learn*" OR **Any Field:** "random forest*" OR **Any Field:** "support vector machine*" OR **Any Field:** "ensemble learn*" OR **Any Field:** "transfer learn*" OR **Any Field:** "hierarchical learn*")	86,285
2	(**Index Terms:** Machine Learning OR **Index Terms:** Machine Learning Algorithm OR **Index Terms:** Artificial Intelligence	19,944
3	(**Any Field:** "Deliri*")	8,622
4	(**Index Terms** Delirium)	4,002
5	1 OR 2	86,657
6	3 OR 4	8,622
7	5 AND 6	20

IEEE Xplore

1	("Full Text & Metadata":"artificial intelligence" OR "Full Text & Metadata":"machine learning" OR "Full Text & Metadata":"random forest" OR "Full Text & Metadata":"supervised learning" OR "Full Text &	747,074

	Metadata":"computer reason" OR "Full Text & Metadata":"deep learning" OR "Full Text & Metadata":"hierarchical learning" OR "Full Text & Metadata":"ensemble learning" OR "Full Text & Metadata":"data mining")	
2	("Full Text & Metadata":Deliri*)	444
3	1 AND 2	155

OSF Pre-prints

1	(title: "Machine learn*" OR title: "Machine Intelligen*" OR title: "Computer Reason*" OR title: "artificial intelligen*" OR title: "supervised learn*" OR title: "unsupervised learn*" OR title:"reinforcement learn*" OR title:"neural network*" OR title:"deep learn*" OR title:"random forest*" OR title:"support vector machine*" OR title:"ensemble learn*" OR title:"transfer learn*" OR title:"hierarchical learn*")	27
2	(title: "deliri*"	3
3	1 AND 2	2

Web Of Science

1	TS=("MACHINE LEARNING" OR "MACHINE INTELLIGENCE" OR "COMPUTER REASONING" OR "ARTIFICIAL INTELLIGENCE" OR "SUPERVISED LEARNING" OR "UNSUPERVISED LEARNING" OR "REINFORCEMENT LEARNING" OR "NEURAL NETWORK" OR "DEEP LEARNING" OR "RANDOM FOREST" OR "SUPPORT VECTOR MACHINE" OR "ENSEMBLE LEARNING" OR "TRANSFER LEARNING" OR "HIERARCHICAL LEARNING")	816,102
2	TS= (Deliri*)	24,841
3	1 AND 2	103

Cochrane Library

1	("machine learning" OR "Machine intelligence" OR "computer reasoning" OR "artficial intelligence" OR "supervised learning" OR "unsupervised learning" OR "reinforcement learning" OR "neural network" OR "deep learning" OR "random forest" OR "support vector machine" OR "ensemble learning" OR "transfer learning" OR "hierarchical learning") ti,ab,kw	3,969
2	MeSH Descriptor: [Machine learning]	234
3	MeSH Descriptor: [Artificial intelligence]	1,408
4	(Deliri*)ti,ab,kw	4,382
5	MeSH Descriptor: [Delirium]	988
6	1 OR 2 OR 3	4,972

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BMJ Health Care Inform

| 7 | 4 OR 5 | 4,382 |
| 8 | 6 AND 7 | 11 |

Aiforhealth.app

1	Title: Delirium	39
2	Abstract: Delirium	60
3	1 OR 2	99