

Supplementary Material

Deneault A, Dumais A, Désilets M, Hudon A. Natural language processing and Schizophrenia: A Scoping Review of Uses and Challenges

Supplementary material S1: Concept plan and search strategies

Concept plan

Natural language processing / Semantic analysis	Patients diagnosed with schizophrenia or psychosis disorders
<p><u>Subject Headings :</u> Natural Language Processing [Mesh]</p> <p><u>Keywords :</u> natural language processing semantic analysis speech analysis processing</p> <p>language linguistic AND Automated Automatic Machine Computational</p>	<p><u>Subject Headings :</u> Schizophrenia Spectrum and Other Psychotic Disorders [Mesh] Schizophrenic Language [Mesh]</p> <p><u>Keywords:</u> Schizophrenia Schizophrenic disorder(s) Schizophrenic patient(s) Schizoaffective Schizoaffective Disorder(s) Schizoaffective patient(s) Schizo-affective Schizo-affective disorders(s) Schizo-affective patient(s) Psychotic Psychosis Psychoses</p>

Concept 1 (Example in Pubmed)

"Natural Language Processing"[MeSH Terms] OR "Natural Language Processing"[TIAB:~3] OR "semantic analysis"[TIAB:~3] OR "speech analysis processing"[TIAB:~3] OR ((language[TIAB] OR linguistic[TIAB]) AND (automated[TIAB] OR automatic[TIAB] OR machine[TIAB] OR computational[TIAB]))

Concept 2 (Example in Pubmed)

"Schizophrenic Language"[Mesh] OR ("Schizophrenia Spectrum and Other Psychotic Disorders"[Mesh]) OR ("schizo*" [TIAB]) OR (psychotic[TIAB]) OR (psychosis[TIAB]) OR (psychoses[TIAB])

Search with keywords

Concept 1

(Natural language or semantic or speech) ADJ3 (processing or analysis)

OR ((language OR linguistic) AND (automated OR automatic OR machine OR computational))

Concept 2

"schizo*" OR psychotic OR psychos?s

PubMed

("Natural Language Processing"[MeSH Terms] OR "Natural Language Processing"[Title/Abstract:~3] OR "semantic analysis"[Title/Abstract:~3] OR "speech analysis processing"[Title/Abstract:~3] OR ("language"[Title/Abstract] OR "linguistic"[Title/Abstract]) AND ("automated"[Title/Abstract] OR "automatic"[Title/Abstract] OR "machine"[Title/Abstract] OR "computational"[Title/Abstract])) AND ("Schizophrenic Language"[MeSH Terms] OR "Schizophrenia Spectrum and Other Psychotic Disorders"[MeSH Terms] OR "schizo*" [Title/Abstract] OR "psychotic"[Title/Abstract] OR "psychosis"[Title/Abstract] OR "psychoses"[Title/Abstract]) AND 2008/01/01:2023/12/31[Date - Publication]) AND (english[Filter] OR french[Filter])

Results: 251

MEDLINE(R)

- 1 Natural Language Processing/
- 2 ((Natural language or semantic or speech analysis) adj3 (processing or analysis)).ab. or ((Natural language or semantic or speech analysis) adj3 (processing or analysis)).ti.
- 3 ((language or linguistic) and (automated or automatic or machine or computational)).ab. or ((language or linguistic) and (automated or automatic or machine or computational)).ti.
- 4 1 or 2 or 3
- 5 exp "Schizophrenia Spectrum and Other Psychotic Disorders"/
- 6 Schizophrenic Language/
- 7 (schizo* or psychotic or psychos?s).ab. or (schizo* or psychotic or psychos?s).ti.
- 8 5 or 6 or 7
- 9 4 and 8
- 10 limit 9 to (yr="2008 -Current" and (english or french))

Results: 247

Embase

- 1 natural language processing/
- 2 ((Natural language or semantic or speech) adj3 (processing or analysis)).ti. or ((Natural language or semantic or speech) adj3 (processing or analysis)).ab.
- 3 ((language or linguistic) and (automated or automatic or machine or computational)).ab. or ((language or linguistic) and (automated or automatic or machine or computational)).ti.
- 4 1 or 2 or 3
- 5 exp schizophrenia spectrum disorder/
- 6 exp psychosis/
- 7 (schizo* or psychotic or psychos?s).ab. or (schizo* or psychotic or psychos?s).ti.
- 8 5 or 6 or 7
- 9 4 and 8
- 10 limit 9 to ((english or french) and yr="2008 -Current" and (article or article in press or "review"))

Results: 476

APA PsycInfo

- 1 natural language processing/ 1009
- 2 ((Natural language or semantic or speech analysis) adj3 (processing or analysis)).ab. or ((Natural language or semantic or speech analysis) adj3 (processing or analysis)).ti. 7811
- 3 ((language or linguistic) and (automated or automatic or machine or computational)).ab. or ((language or linguistic) and (automated or automatic or machine or computational)).ti. 6987
- 4 1 or 2 or 3 14079
- 5 exp psychosis/ 128046
- 6 (schizo* or psychotic or psychos?s).ab. or (schizo* or psychotic or psychos?s).ti. 183972
- 7 5 or 6 190368
- 8 4 and 7 390
- 9 limit 8 to (("0100 journal" or "0110 peer-reviewed journal" or "0120 non-peer-reviewed journal" or "0130 peer-reviewed status unknown") and journal article and (english or french) and yr="2008 - Current")

Results: 198