

Nr	Author	Year	Data sources								Did the authors provide any reason for the selection of THIS data source?	Did the authors consider any alternative data source? (incl. CTIs, exploit DBs, etc.)	Input Data Type			NLP Approach						Type of CTI	Output		
			Social Networks	News Articles	Security Reports	Public security repositories (CVEs, exploit DBs, etc.)	CTI Feeds	Underground Forums	Darknet marketplace	Darknet websites			Unstructured (e.g. posts)	Semi-structured (e.g. html files for web pages, json, xml, or similar)	Structured (e.g. STIX)	Named Entity Recognition (NER)	Topic Modeling	Sentiment Analysis	Text Classification	Summarization	Keyword Extraction		unstructured CTI	semi-structured CTI	structured CTI (STIX)
1	Shin	2021	x								Yes	No	x			x				x		Technical/Tactical	x		
2	Adewopo	2020	x		x	x		x			Yes	No	x	x					x			Technical/Tactical	x		
3	Zhao	2020	x	x	x			x		x	No	No	x	x				x	x			Technical/Tactical	x	x	
4	Kokoreas	2021	x								Yes	No	x	x		x		x			x	Operational			x
5	Tekin	2021	x								Yes	Yes	x					x				Technical/Tactical	x	x	
6	Kristiansen	2020	x								Yes	Yes	x					x				Technical/Tactical	x	x	
7	Rodriguez	2020	x	x	x						Yes	Yes	x					x			x	Technical/Tactical	x		
8	Azevedo	2019					x				No	No	x*					x		x		Technical/Tactical	x		
9	Hossen	2021						x			Yes	Yes	x					x		x		Technical/Tactical	x		
10	Gao	2023					x				No	No	x	x						x		Operational	x		
11	Bose	2021	x								No	No	x					x	x			Operational	x		
12	Kadoguchi	2020						x			Yes	No	x					x				Technical/Tactical	x		
13	Zhou	2022		x	x						No	No	x								x	Technical/Tactical	x		
14	Sakellariou	2023									No	No	x					x				Technical/Tactical			x
15	Arnold	2019						x		x	Yes	No	x					x			x	Strategic	x		
16	Tundis	2022	x								Yes	No	x					x				Operational	x		
17	Cha	2020					x				No	No	x							x		Technical/Tactical	x		
18	Ampel	2020				x		x		x	Yes	No	x	x				x				Technical/Tactical	x		
19	Purba	2023	x			x					No	No	x	x				x				Technical/Tactical	x		
20	Sun	2021			x						Yes	No		x				x		x		Technical/Tactical			x
21	Huang	2020	x	x		x				x	Yes	No	x	x				x	x	x		Operational		x	
22	Zenebe	2019						x			Yes	No	x					x				Technical/Tactical	x		
23	Sufi	2023	x								Yes	Yes	x					x				Strategic	x		
24	Sufi	2023	x			x					No	No	x	x				x				Strategic	x		
25	Furumoto	2021						x		x	Yes	No		x					x			Technical/Tactical	x		
26	Gutam	2019						x			Yes	Yes	x						x		TC	Technical/Tactical	x		
27	Panagiotou	2021		x							Yes	Yes	x	x					x			Technical/Tactical	x		