1 COVERAGE REPORT

We evaluate 's ability to support an unknown API with a comprehensive survey on two groups of APIs (50 per group). The goal is to understand if 's design has the ability to support a new API. One group is the most frequently visited popular websites [1] like Youtube and Wikipedia. 31 out of 50 have released official public free API to users. For the remaining 19 websites, they either do not have public APIs or only open the API for commercial use. For the websites providing multiple APIs, we pick a search API for evaluation. The other group is the randomly sampled domain-specific APIs from a popular Github API hubpage [2].

Figure 1 shows the coverage report. For the authorization mechanism, among the 31 popular websites, is able to support 30 of their authorization mechanisms. The exception is the Apple Ads Search API that uses an SSL authentication based certificate for authorization, for which we currently do support. 18 out of 30 APIs adopts QueryParam authorization for its good flexibility. For 50 domain-specific APIs, is able to support 48 of them. The two exceptions adopt OAuth1.0 standard, which is not a main-stream authorization type anymore. It's trivial to add the support of them, and we leave it for future work. Among these APIs, no auth and QueryParam are both common (each with a frequency of 19).

For the pagination mechanism, we support all the APIs with the mechanisms stated in our paper. We find offset-based pagination schemes are clearly more widely adopted than cursor-based. Specifically, for the popular websites, 12 out of 31 adopt offset & limit based pagination and 6 out of 31 adopt page & perpage scheme. For the domain-specific APIs, interestingly, no pagination is the most common (25 out of 50) because open data websites like Open Government Canada, they do not require either authorization or pagination. Besides, 10 are offset & limit based, and 12 are page & perpage based.

REFERENCES

- [1] 2020. Most visited Websites. Retrieved September 22, 2020 from https://ahrefs.com/blog/most-visited-websites/
- [2] 2023. public-apis. Retrieved March 16, 2023 from https://github.com/public-apis/public-apis

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No.	API	Auth	Pagi-	
1	Youtube Data	QP&BE	HC	
2	Wikipedia API	NA	NP	
3	Twitter Search	OA2	IC	
4	Facebook Graph	QP	HC&OL	
5	Amazon CloudSearch	QP	OL	
6	Yelp Fusion	BE	OL	
7	Reddit Search	BE	IC	
8	IMDB	N/A		
9	Wikia Search	NA	PP	
10	Pinterest API	QP	HC	
11	Tripadvisor	QP	OL	
12	Instagram Graph	QP	HC	
13	Walmart Search	QP	OL	
14	Craigslist API	NA NP		
15	Ebay Browse	BE	OL	
16	Linkedin API	BE	OL	
17	Google Play API	BE	HC	
18	HealthLine	N/A		
19	Etsy API	QP	OL	
20	Indeed Search	QP	OL	
21	Apple Search Ads	OT	OL	
22	ESPN API	N/A		
23	webmd	N/A		
24	NY times	QP	PP	
25	Google Search	QP	HC	
26	CNN News Search	QP	OL	
27	Merriam-Webster	QP	NP	
	Dictionary	Φ.		
28	Gamepedia.com	N/A		
29	Bing Search	BE	OL	
30	Target	N/A		
31	HomeDepot	N/A	Ą	
32	Quora	N/A	Ą	
33	Clinical Table Search	NA	NP	
	Service			
34	RottenTomatoes	N/A		
35	Netflix	N/A		
36	Quizlet	N/A		
37	weather.com	N/A		
38	MapQuest API	QP	PP	
39	britannica.com	N/A	Α	
40	businessinsider	N/A	4	
41	dictionary.com	N/A		
42	Zillow Listings	QP&OA2	IC	
43	mayoclinic	N/A		
44	BestBuy Products	QP	PP&HC	
45	The Guardian Open	QP	PP	
	Platform			
46	Yahoo Fantasy Sports	BE	PP	
47	Microsoft News	QP	OL	
48	usatoday	N/A		
49	medicalnewstoday	N/A		

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