

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>

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 Dictionary	QP	NP
28	Gamepedia.com	N/A	
29	Bing Search	BE	OL
30	Target	N/A	
31	HomeDepot	N/A	
32	Quora	N/A	
33	Clinical Table Search Service	NA	NP
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	
40	businessinsider	N/A	
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 Platform	QP	PP
46	Yahoo Fantasy Sports	BE	PP
47	Microsoft News	QP	OL
48	usatoday	N/A	
49	medicalnewstoday	N/A	

No.	API	Domain	Auth	Pagi-
1	UPS	Tracking	OA2	NP
2	Zippopotam	Geocoding	NA	NP
3	The Lord of the Rings	Video	BE	OL
4	Noun Project	Art & Design	OA	OL
5	NOAA Climate Data	Weather	NA	OL
6	Clash of Clans	Games & Comics	BE	PP
7	geoPlugin	Geocoding	NA	NP
8	Trello	Business	QP	IC
9	OpenCorporates	Open Data	QP	PP
10	Associated Press	News	QP	HC
11	Gitter	Development	OA2	IC
12	Coinigy	Cryptocurrency	QP	NP
13	World Bank	Science & Math	NA	PP
14	PlaceGOAT	Animals	NA	NP
15	FakeJSON	Test Data	QP	NP
16	Wargaming.net	Games & Comics	QP	PP
17	Dribbble	Art & Design	BE	PP
18	Bitmex	Cryptocurrency	QP	OL
19	SHOUTCLOUD	Development	NA	NP
20	Mercedes-Benz	Vehicle	BE	NP
21	Yes No	Test Data	NA	NP
22	Universities List	Open Data	NA	NP
23	Dialogflow	Machine Learning	QP	NP
24	Semantira	Text Analysis	OA2	NP
25	Travis CI	Continuous Integration	QP	IC
26	Behance	Art & Design	QP	PP
27	CitySDK	Geocoding	NA	PP
28	Transport for Boston, US	Transportation	NA	OL
29	OpenCage	Geocoding	QP	NP
30	Flickr	Photography	OA	PP
31	Transport for Czech Republic	Transportation	NA	OL
32	NiceHash	Cryptocurrency	QP	PP
33	OnWater	Geocoding	QP	NP
34	PurgoMalum	Data Validation	NA	NP
35	Transport for Bordeaux, France	Transportation	QP	OL
36	TVDB	Video	BE	NP
37	Slack	Social	OA2	OL&HC
38	Open Government, Canada	Government	NA	NP
39	DomainDb Info	Development	QP	PP
	Open Government			