

```
[7] import requests
import json
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from datetime import datetime
from IPython.core.display import display, HTML
# make sure pandas doesn't truncate the dataframe when rendered
pd.set_option('display.max_rows', 500)

import tasking_manager_client as tm

# set the text search keyword
textSearch = 'covid'
projectStatuses = 'ARCHIVED,PUBLISHED,DRAFT'

# for notebooks used for reporting, it's nice to
# timestamp of the data, since it can get old quickly
now = datetime.utcnow()
print(f'data last updated: {now} UTC')
print(f'tasking manager: {tm.DEFAULT_INSTANCE_API}')
print(f'search keyword: {textSearch}')
```

```
data last updated: 2020-07-16 11:54:09.319969 UTC
tasking manager: tasking-manager-tm4-production-api.hotosm.org
search keyword: covid
```

```
[6] # concatenate paginated API results into one dataframe
result = pd.concat(tm.v2.project_search(textSearch=textSearch,
projectStatuses=projectStatuses), ignore_index=True);
# search API pagination sometimes returns the same project more
than once (due to pageintaion cacheing)
result = result.drop_duplicates(subset='projectId');
```

```
[10] result.columns
```

```
Index(['activeMappers', 'campaigns', 'country', 'dueDate',
      'lastUpdated',
      'locale', 'mapperLevel', 'name', 'organisationLogo',
      'organisationName',
      'percentMapped', 'percentValidated', 'priority', 'projectId',
      'shortDescription', 'status', 'totalContributors', 'page'],
      dtype='object')
```

```
[57] result['country'] = result['country'].apply(lambda val: val[0] if
instance(val, list) else val)
display_result = result.sort_values(by=['country',
'status','projectId' ])
display_result =
display_result[['projectId','country','percentValidated',
'percentMapped', 'mapperLevel','status', 'priority']]
display_result.to_csv('covid-textSearch.csv')
```

```
[62] styled = display_result.style\
    .background_gradient(cmap=tm.style.hotosm_cmap(),subset=
['percentMapped', 'percentValidated'])\
    .applymap(tm.style.format_priority, subset=['priority'])\
    .applymap(tm.style.format_status, subset=['status'])
styled
```

	projectId	country	percentValidated	percentMapped	ma
188	8512	Botswana	100	100	BE
196	8571	Botswana	99	99	BE
66	8572	Botswana	100	100	BE
197	8573	Botswana	100	100	BE
198	8574	Botswana	99	99	BE
199	8575	Botswana	99	99	BE
200	8576	Botswana	100	100	BE
201	8577	Botswana	100	100	BE
202	8578	Botswana	98	100	BE
203	8579	Botswana	93	98	BE
204	8580	Botswana	100	100	BE
205	8582	Botswana	100	100	BE
206	8583	Botswana	100	100	BE
207	8584	Botswana	100	100	BE
208	8585	Botswana	100	100	BE
209	8586	Botswana	100	100	BE

	projectId	country	percentValidated	percentMapped	ma
210	8587	Botswana	100	100	BE
211	8588	Botswana	100	100	BE
220	8684	Botswana	99	100	BE
221	8685	Botswana	100	100	BE
223	8690	Botswana	100	100	BE
226	8701	Botswana	100	100	BE
227	8702	Botswana	100	100	BE
228	8703	Botswana	100	100	BE
230	8705	Botswana	100	100	BE
231	8706	Botswana	100	100	BE
232	8707	Botswana	100	100	BE
239	8806	Botswana	100	100	BE
240	8811	Botswana	100	100	BE
244	8869	Botswana	100	100	BE
245	8870	Botswana	100	100	BE
246	8871	Botswana	100	100	BE
247	8872	Botswana	100	100	BE
248	8889	Botswana	100	100	BE
249	8890	Botswana	100	100	BE
250	8891	Botswana	100	100	BE
251	8892	Botswana	100	100	BE
253	8904	Botswana	100	100	BE
255	8954	Botswana	0	20	BE
256	8955	Botswana	29	100	BE
266	9014	Botswana	100	100	BE
267	9016	Botswana	100	100	BE
269	9032	Botswana	100	100	BE

	projectId	country	percentValidated	percentMapped	ma
219	8683	Botswana	0	0	BE
224	8699	Botswana	0	0	BE
222	8688	Botswana	32	85	BE
225	8700	Botswana	0	33	BE
229	8704	Botswana	100	100	BE
234	8763	Botswana	0	46	BE
235	8764	Botswana	0	52	BE
236	8765	Botswana	0	28	BE
2	8767	Botswana	0	27	BE
68	8768	Botswana	96	100	BE
241	8812	Botswana	100	100	BE
252	8894	Botswana	0	92	BE
33	8903	Botswana	100	100	BE
37	8996	Botswana	61	98	BE
268	9020	Botswana	100	100	BE
38	9043	Botswana	0	100	BE
26	8788	Brasil	0	58	BE
27	8789	Brasil	0	19	BE
13	8317	Brazil	25	100	BE
5	8188	Colombia	100	100	BE
39	8189	Colombia	63	98	BE
40	8190	Colombia	0	15	BE
41	8191	Colombia	4	6	BE
42	8192	Colombia	0	22	BE
43	8193	Colombia	2	36	BE
44	8194	Colombia	22	24	BE
45	8195	Colombia	0	4	BE

	projectId	country	percentValidated	percentMapped	ma
46	8196	Colombia	0	6	BE
47	8197	Colombia	5	15	BE
48	8198	Colombia	12	39	BE
49	8199	Colombia	81	87	BE
50	8200	Colombia	0	76	BE
51	8201	Colombia	1	27	BE
52	8202	Colombia	5	57	BE
53	8203	Colombia	2	48	BE
212	8593	Colombia	2	57	BE
64	8472	Democratic Republic of the Congo	0	0	IN
257	8986	Jamaika	0	0	BE
258	8987	Jamaika	0	0	BE
259	8988	Jamaika	0	0	BE
260	8989	Jamaika	0	0	BE
261	8990	Jamaika	0	0	BE
262	8991	Jamaika	0	0	BE
263	8992	Jamaika	0	0	BE
264	8994	Jamaika	0	0	BE
36	8963	Jamaika	34	99	BE
4	8964	Jamaika	18	74	BE
265	8995	Jamaika	0	16	BE
29	8823	Kenya	0	8	IN
31	8863	Kenya	0	1	IN
69	8816	Liberia	16	100	BE
70	8825	Liberia	0	100	BE
71	8826	Liberia	9	100	BE

	projectId	country	percentValidated	percentMapped	ma
72	8827	Liberia	0	100	BE
73	8874	Liberia	0	95	BE
74	8875	Liberia	0	0	BE
75	8876	Liberia	15	100	BE
76	8877	Liberia	4	100	BE
77	8878	Liberia	11	96	BE
78	8879	Liberia	0	0	BE
32	8880	Liberia	9	9	BE
82	8906	Liberia	0	0	BE
83	8907	Liberia	0	0	BE
84	8908	Liberia	0	79	BE
85	8909	Liberia	0	100	BE
86	8910	Liberia	13	95	BE
87	8911	Liberia	0	40	BE
88	8912	Liberia	0	100	BE
89	8913	Liberia	0	5	BE
90	8914	Liberia	2	100	BE
91	8915	Liberia	0	96	BE
92	8916	Liberia	0	100	BE
93	8917	Liberia	0	100	BE
94	8918	Liberia	0	94	BE
95	8919	Liberia	20	91	BE
96	8920	Liberia	0	95	BE
97	8935	Liberia	0	5	BE
98	8936	Liberia	0	0	BE
99	8937	Liberia	0	0	BE
100	8938	Liberia	0	100	BE

	projectId	country	percentValidated	percentMapped	ma
101	8939	Liberia	0	100	BE
102	8940	Liberia	0	13	BE
103	8980	Liberia	0	98	BE
104	8981	Liberia	0	100	BE
24	8697	Malawi	0	44	BE
115	813	Mali	0	9	IN
185	8469	Mali	100	100	IN
186	8470	Mali	100	100	IN
187	8471	Mali	100	100	BE
189	8546	Mali	100	100	AD
233	8759	Mali	100	100	BE
254	8924	Mali	0	0	BE
105	8997	Mali	0	0	BE
1	8545	Mali	97	98	IN
25	8771	Mali	0	88	BE
3	8925	Mali	65	100	BE
34	8926	Mali	0	65	BE
35	8942	Nepal	0	21	BE
116	5909	Peru	100	100	BE
118	7379	Peru	100	100	BE
119	7719	Peru	100	100	BE
120	7720	Peru	100	100	BE
121	7721	Peru	100	100	BE
122	7768	Peru	100	100	BE
123	7769	Peru	100	100	BE
125	7968	Peru	100	100	BE
126	7969	Peru	100	100	BE

	projectId	country	percentValidated	percentMapped	ma
127	7970	Peru	100	100	BE
128	7971	Peru	100	100	BE
129	7972	Peru	100	100	BE
130	8047	Peru	99	99	BE
131	8048	Peru	100	100	BE
135	8213	Peru	100	100	IN
137	8216	Peru	99	99	BE
138	8217	Peru	99	99	BE
141	8247	Peru	99	99	BE
148	8258	Peru	100	100	BE
149	8259	Peru	100	100	BE
154	8269	Peru	99	99	BE
55	8282	Peru	100	100	BE
117	7372	Peru	100	100	BE
124	7770	Peru	100	100	BE
132	8049	Peru	100	100	BE
134	8212	Peru	100	100	BE
136	8214	Peru	99	100	BE
139	8218	Peru	100	100	BE
140	8219	Peru	100	100	BE
6	8248	Peru	97	100	BE
7	8249	Peru	100	97	BE
142	8250	Peru	100	100	BE
143	8251	Peru	100	100	BE
144	8254	Peru	100	100	BE
145	8255	Peru	100	100	BE
146	8256	Peru	99	100	BE



	projectId	country	percentValidated	percentMapped	ma
147	8257	Peru	100	100	BE
150	8260	Peru	95	100	BE
151	8261	Peru	100	100	BE
152	8262	Peru	61	99	BE
153	8268	Peru	100	100	BE
155	8270	Peru	96	99	BE
156	8271	Peru	95	100	BE
8	8272	Peru	100	100	BE
157	8273	Peru	99	100	BE
158	8274	Peru	100	100	BE
159	8275	Peru	100	100	BE
160	8276	Peru	100	100	BE
0	8277	Peru	62	99	BE
161	8278	Peru	92	98	BE
162	8279	Peru	99	100	BE
163	8280	Peru	95	99	BE
9	8281	Peru	99	100	BE
10	8301	Peru	0	85	IN
164	8306	Peru	0	98	BE
165	8307	Peru	0	99	BE
166	8308	Peru	99	99	BE
11	8309	Peru	100	100	BE
12	8310	Peru	32	92	BE
56	8311	Peru	100	100	BE
57	8397	Peru	100	100	BE
58	8398	Peru	99	99	BE
14	8400	Peru	100	100	BE

	projectId	country	percentValidated	percentMapped	ma
59	8401	Peru	100	100	BE
60	8403	Peru	99	99	BE
169	8406	Peru	100	100	BE
170	8408	Peru	97	100	BE
171	8409	Peru	92	100	BE
61	8410	Peru	98	100	BE
172	8411	Peru	100	100	BE
15	8416	Peru	100	100	BE
173	8417	Peru	86	94	BE
16	8418	Peru	97	100	BE
174	8419	Peru	100	100	BE
17	8420	Peru	100	100	BE
175	8421	Peru	99	100	BE
176	8422	Peru	97	99	BE
62	8423	Peru	100	100	BE
177	8445	Peru	100	100	BE
178	8446	Peru	95	96	BE
179	8447	Peru	94	99	BE
18	8448	Peru	96	100	BE
180	8449	Peru	100	100	BE
19	8450	Peru	98	100	BE
63	8451	Peru	82	91	BE
181	8452	Peru	92	99	BE
182	8453	Peru	100	100	BE
20	8454	Peru	89	91	BE
21	8455	Peru	100	100	BE
22	8465	Peru	98	100	BE

	projectId	country	percentValidated	percentMapped	ma
183	8466	Peru	73	85	BE
184	8467	Peru	100	100	BE
23	8468	Peru	0	100	BE
190	8551	Peru	100	100	BE
191	8552	Peru	100	100	BE
192	8553	Peru	100	100	BE
193	8554	Peru	97	98	BE
194	8555	Peru	0	97	BE
195	8556	Peru	99	99	BE
213	8596	Peru	100	100	BE
214	8597	Peru	0	98	BE
215	8598	Peru	100	100	BE
216	8599	Peru	100	100	BE
217	8600	Peru	0	100	BE
218	8601	Peru	0	96	BE
237	8766	Peru	99	99	BE
167	8385	Philippines	99	100	IN
168	8386	Philippines	100	100	IN
67	8609	République Démocratique du Congo	0	0	IN
133	8159	South Africa	30	90	BE
54	8232	Sri Lanka	93	100	IN
112	9033	Uganda	0	0	BE
238	8795	Uganda	100	100	BE
242	8815	Uganda	100	100	BE
28	8817	Uganda	99	100	BE
243	8841	Uganda	100	100	BE

	projectId	country	percentValidated	percentMapped	ma
30	8843	Uganda	97	100	BE
79	8884	Uganda	95	95	BE
80	8885	Uganda	100	100	BE
81	8886	Uganda	100	100	BE
106	9012	Uganda	96	97	BE
107	9013	Uganda	100	100	BE
108	9015	Uganda	100	100	BE
109	9027	Uganda	100	100	BE
110	9028	Uganda	100	100	BE
113	9034	Uganda	97	99	BE
114	9045	Uganda	84	99	BE
65	8547	Yemen	2	97	BE
111	9031	اليَمَن al-Yaman	0	3	BE



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