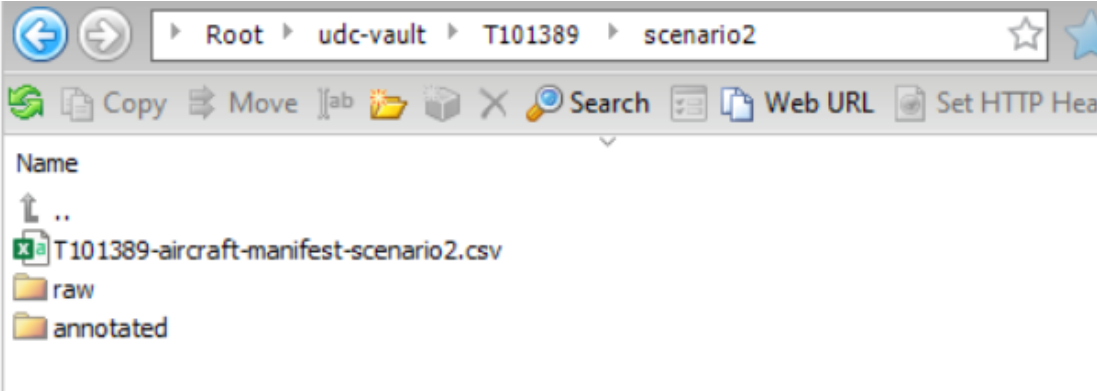


# **Demo: Unified Data Catalog for Military Aircraft**

## **Scenario 2: Index & Tag Multi-dimensional Dataset**

**Frank Lee**

<https://github.com/drfranknlee/demo-udc-aircraft>




Upload Manifest to Cloud Object Storage Bucket

	A	B	C	D	E	F	G	H	I
1		u2-width	u2-height	u2-type	u2-xmin	u2-ymin	u2-xmax	u2-ymax	u2-id
2	udc-vault/T101389/scenario2/annotated/000ec980b5b17156a55093b4bd6004ab.jpg	1000	551	Be200	308	126	651	201	T101389-10000
3	udc-vault/T101389/scenario2/annotated/00afb4420bdce881ad216867c713c800.jpg	1200	800	Mig31	299	197	1102	569	T101389-10001
4	udc-vault/T101389/scenario2/annotated/00b2add164cb42440a52064e390ea3d2.jpg	1280	850	B1	322	112	893	618	T101389-10002
5	udc-vault/T101389/scenario2/annotated/00b627cb5578bb036edb01cdcf7b56d9.jpg	1300	867	F35	607	204	1202	529	T101389-10003
6	udc-vault/T101389/scenario2/annotated/00c09f406d31a0cd9402862fbd26d930.jpg	1800	1200	A10	32	60	1800	766	T101389-10004
7	udc-vault/T101389/scenario2/annotated/00c54e200e0d868faac8c55bfca70dbe.jpg	1200	1200	V22	647	521	973	768	T101389-10005
8	udc-vault/T101389/scenario2/annotated/00d4b7ea93ca1417393007c61c519f88.jpg	1200	675	A10	560	308	647	329	T101389-10006
9	udc-vault/T101389/scenario2/annotated/00db76f676528477c66c93c7d24d7524.jpg	1280	857	F117	176	263	1280	553	T101389-10007
10	udc-vault/T101389/scenario2/annotated/00ebecac178be3c3890a067d6a28234e.jpg	960	640	C5	58	133	889	397	T101389-10008
11	udc-vault/T101389/scenario2/annotated/00f4279089ddc0d40e1470894f827f2e.jpg	2048	1365	C5	875	398	1110	629	T101389-10009
12	udc-vault/T101389/scenario2/annotated/0a2a11a8658d69b6cd1fd23c5f4513bd.jpg	960	640	Tu160	1	155	903	506	T101389-10010
13	udc-vault/T101389/scenario2/raw/000ec980b5b17156a55093b4bd6004ab.jpg	1000	551	Be200					T101389-10000
14	udc-vault/T101389/scenario2/raw/00afb4420bdce881ad216867c713c800.jpg	1200	800	Mig31					T101389-10001
15	udc-vault/T101389/scenario2/raw/00b2add164cb42440a52064e390ea3d2.jpg	1280	850	B1					T101389-10002
16	udc-vault/T101389/scenario2/raw/00b627cb5578bb036edb01cdcf7b56d9.jpg	1300	867	F35					T101389-10003
17	udc-vault/T101389/scenario2/raw/00c09f406d31a0cd9402862fbd26d930.jpg	1800	1200	A10					T101389-10004
18	udc-vault/T101389/scenario2/raw/00c54e200e0d868faac8c55bfca70dbe.jpg	1200	1200	V22					T101389-10005
19	udc-vault/T101389/scenario2/raw/00d4b7ea93ca1417393007c61c519f88.jpg	1200	675	A10					T101389-10006
20	udc-vault/T101389/scenario2/raw/00db76f676528477c66c93c7d24d7524.jpg	1280	857	F117					T101389-10007
21	udc-vault/T101389/scenario2/raw/00ebecac178be3c3890a067d6a28234e.jpg	960	640	C5					T101389-10008
22	udc-vault/T101389/scenario2/raw/00f4279089ddc0d40e1470894f827f2e.jpg	2048	1365	C5					T101389-10009
23	udc-vault/T101389/scenario2/raw/0a2a11a8658d69b6cd1fd23c5f4513bd.jpg	960	640	Tu160					T101389-10010

# Query builder

Visual query   **SQL query**

Select \* from Spectrum Discover where...

 filename LIKE ('%T101389/scenario2%') AND filetype LIKE ('jpg')

Group by

1 × Groups selected

Limit results

10000

Setting a lower limit may increase speed of results.

Sort

e.

Set a

Reset query

View results

Query Results

Results view: ?

Condensed Individual

Inspecting records  
22

Grouped By

- ☐ Cluster
- ☐ Datasource
- ☐ Filegroup
- ☐ Filename
- ☐ Fileset

Show more...

Matched 22 records from metaocean\_view table in 0.602168 seconds

<input type="checkbox"/>	path	filename	udc dem2	u2 type	u2 width	u2 height
<input type="checkbox"/>	udc-vault/	T101389/scenario2/raw/00c54e200e0d868faac8c55bfca70dbe.jpg	NULL	NULL	NULL	NULL
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00c54e200e0d868faac8c55bfca70dbe.jpg	NULL	NULL	NULL	NULL
<input type="checkbox"/>	udc-vault/	T101389/scenario2/raw/00d4b7ea93ca1417393007c61c519f88.jpg	NULL	NULL	NULL	NULL
<input type="checkbox"/>	udc-vault/	T101389/scenario2/raw/00c09f406d31a0cd9402862fbd26d930.jpg	NULL	NULL	NULL	NULL
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00c09f406d31a0cd9402862fbd26d930.jpg	NULL	NULL	NULL	NULL
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00d4b7ea93ca1417393007c61c519f88.jpg	NULL	NULL	NULL	NULL
<input type="checkbox"/>	udc-vault/	T101389/scenario2/raw/000ec980b5b17156a55093b4bd6004ab.jpg	NULL	NULL	NULL	NULL
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/000ec980b5b17156a55093b4bd6004ab.jpg	NULL	NULL	NULL	NULL
<input type="checkbox"/>	udc-vault/	T101389/scenario2/raw/00afb4420bdce881ad216867c713c800.jpg	NULL	NULL	NULL	NULL
<input type="checkbox"/>	udc-vault/	T101389/scenario2/raw/00db76f676528477c66c93c7d24d7524.jpg	NULL	NULL	NULL	NULL
Items per page:		10	1-10 of 22 items			1 of 3 pages

```
[moadmin@discover1 ~]$ pwd
/home/moadmin
[moadmin@discover1 ~]$ cd T101389/
[moadmin@discover1 T101389]$ ls
T101389_aircraft_import_scenario1.json  T101389_aircraft_import_scenario2.json
[moadmin@discover1 T101389]$
[moadmin@discover1 T101389]$
[moadmin@discover1 T101389]$ gettoken
  % Total      % Received % Xferd  Average Speed   Time    Time       Time  Current
                        Dload  Upload   Total   Spent    Left   Speed
   0      0    0     0    0     0      0      0  --:--:--  --:--:--  --:--:--     0
[moadmin@discover1 T101389]$
[moadmin@discover1 T101389]$ curl -k -H "Authorization: Bearer ${TOKEN}" https://localhost/policyengine/v1/
policies/T101389_aircraft_import_scenario2_pol -X POST -d @./T101389_aircraft_import_scenario2.json -H "Con
tent-Type: application/json"
Policy 'T101389_aircraft_import_scenario2_pol' added[moadmin@discover1 T101389]$
```

Tag management

- Tags
- Policies
- Policy history

									🔍	⚙️
Policy name	Type	Started	Ended	Status		Total records	Successful	Skipped	Failed	
T101389_aircraft_import_scenario2_pol	IMPORT_TAGS	9/21/2021, 1:03:52 AM	9/21/2021, 1:04:11 AM	✔️	Complete	22	22	0	0	
T101389_aircraft_import_scenario1_pol	IMPORT_TAGS	9/20/2021, 11:21:32 PM	9/20/2021, 11:21:49 PM	✔️	Complete	11	11	0	0	
T101389_aircraft_import_scenario1_pol	IMPORT_TAGS	9/20/2021, 11:17:06 PM	9/20/2021, 11:17:22 PM	✔️	Complete	11	11	0	0	
T101389_aircraft_import_pol	IMPORT_TAGS	9/20/2021, 9:18:41 PM	9/20/2021, 9:18:59 PM	✔️	Complete	11	11	0	0	

# Query builder

Visual query   SQL query

Select \* from Spectrum Discover where...



filename LIKE ('%T101389%') AND filetype LIKE ('jpg')

Group by

Choose groupings



Limit results

10000



Setting a lower limit may increase speed of results.

Sort by

e.g. owner asc

Set a sort order to choose which results are returned first.

Reset query

View results



Query Results

Results view: ?

Condensed

Individual

Inspecting records  
22

Grouped By

☐ Cluster

☐ Datasource

☐ Filegroup

☐ Filename

☐ Fileset

Show more...

Matched 22 records from metaocean\_view table in 0.026983 seconds

filename

u2 id

u2 type

u2 width

u2 height

u2 xmin

u2 xmax

u2 yi

T101389/scenario2  
/raw/00c54e200e0d868faac8c55bfca70dbe.jpg

T101389-10005

V22

1200

1200

NULL

NULL

N

T101389/scenario2/annotated  
/00c54e200e0d868faac8c55bfca70dbe.jpg

T101389-10005

V22

1200

1200

647

973

T101389/scenario2  
/raw/00d4b7ea93ca1417393007c61c519f88.jpg

T101389-10006

A10

1200

675

NULL

NULL

N

T101389/scenario2  
/raw/00c09f406d31a0cd9402862fbd26d930.jpg

T101389-10004

A10

1800

1200

NULL

NULL

N

T101389/scenario2/annotated  
/00c09f406d31a0cd9402862fbd26d930.jpg

T101389-10004

A10

1800

1200

32

1800

T101389/scenario2/annotated  
/00d4b7ea93ca1417393007c61c519f88.jpg

T101389-10006

A10

1200

675

560

647

T101389/scenario2  
/raw/000ec980b5b17156a55093b4bd6004ab.jpg

T101389-10000

Be200

1000

551

NULL

NULL

N

T101389/scenario2/annotated  
/000ec980b5b17156a55093b4bd6004ab.jpg

T101389-10000

Be200

1000

551

308

651

Items per page: 10


1-10 of 22 items

1 of 3 pages

# Query builder

Visual query   **SQL query**

Select \* from Spectrum Discover where...

 filename LIKE ('%T101389/scenario2%') AND filetype LIKE ('jpg') AND filename LIKE ('%annotated%')

Group by

Choose groupings

Limit results

10000

Setting a lower limit may increase speed of results.

Reset query

View results

Custom-tag the Selected Data to create a New Dataset “T101389-s2”

← Back to query builder

Query Results

Results view: ⓘ

Matched 11 records from metaocean\_view table in 0.02125 seconds

Condensed

Individual

11 items selected

Generate reportAdd tagsExport dataCancel

<input checked="" type="checkbox"/>	path	filename	u2 id	u2 type	u2 width	u2 height	u2 xmin	u2 xmax
<input checked="" type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00b627cb5578bb036edb01cdcf7b56d9.jpg	T101389-10003	F35	1300	867	607	1200
<input checked="" type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00f4279089ddc0d40e1470894f827f2e.jpg	T101389-10009	C5	2048	1365	875	1110
<input checked="" type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00b2add164cb42440a52064e390ea3d2.jpg	T101389-10002	B1	1280	850	322	890
<input checked="" type="checkbox"/>	udc-	T101389/scenario2/annotated	T101389-10000	T-140	810	610	1	800

Inspecting records11

Grouped By

- ☐ Cluster
- ☐ Datasource
- ☐ Filegroup
- ☐ Filename
- ☐ Fileset

Show more...

Add tags

11 files selected

udc-dem2

→

T101389-s2

Add another tag

Cancel

Submit

Custom-tag the Selected Data to create a New Dataset “T101389-s2”: Result

Results view:

Matched 11 records from metaocean\_view table in 0.022914 seconds

Condensed Individual

Inspecting records  
11

Grouped By

- ☐ Cluster
- ☐ Datasource
- ☐ Filegroup
- ☐ Filename
- ☐ Fileset

Show more...

u2 id	udc dem2	u2 type	u2 width	u2 height	u2 xmin	u2 xmax	u2 ymin	u2 ymax
T101389-10005	T101389-s2	V22	1200	1200	647	973	521	768
T101389-10004	T101389-s2	A10	1800	1200	32	1800	60	766
T101389-10006	T101389-s2	A10	1200	675	560	647	308	329
T101389-10000	T101389-s2	Be200	1000	551	308	651	126	201
T101389-10001	T101389-s2	Mig31	1200	800	299	1102	197	569
T101389-10007	T101389-s2	F117	1280	857	176	1280	263	553
T101389-10003	T101389-s2	F35	1300	867	607	1202	204	529
T101389-10009	T101389-s2	C5	2048	1365	875	1110	398	629
T101389-10002	T101389-s2	B1	1280	850	322	893	112	618

Items per page: 10

1-10 of 11 items

1 of 2 pages

Find the Newly Tagged Dataset with Visual Query

Query builder

Visual query

SQL query

Query preview...

Site

0/5

Sizerange

0/4

State

0/2

Td\_bh01\_tumor

0/10

Temperature

0/1

Tier

0/2

Timesinceaccess

0/5

U2-id

0/12

U2-type

0/10

Udc-dem2

0/5



☐ udc-dem2

count

☐ NULL

21,973

☐ T101389-s1

11

☐ T101389-s2

11

☐ E1016270-SGDSO

8

☐ E1016270-demo

1

Items per page: 10

1–5 of 5 items

1 of 1 pages

Find the Newly Tagged Dataset with Visual Query: Result

Results view:

Matched 11 records from metaocean\_view table in 0.042898 seconds

Condensed Individual

Inspecting records

11

Grouped By

- ☐ Cluster
- ☐ Datasource
- ☐ Filegroup
- ☐ Filename
- ☐ Fileset

Show more...


<input type="checkbox"/>	path	filename	u2 id	udc dem2	u2 type	u2 width	u2 height	u2 xm
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00c54e200e0d868faac8c55bfca70dbe.jpg	T101389-10005	T101389-s2	V22	1200	1200	64
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00c09f406d31a0cd9402862fbd26d930.jpg	T101389-10004	T101389-s2	A10	1800	1200	3
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00d4b7ea93ca1417393007c61c519f88.jpg	T101389-10006	T101389-s2	A10	1200	675	50
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/000ec980b5b17156a55093b4bd6004ab.jpg	T101389-10000	T101389-s2	Be200	1000	551	30
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00afb4420bdce881ad216867c713c800.jpg	T101389-10001	T101389-s2	Mig31	1200	800	20
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00db76f676528477c66c93c7d24d7524.jpg	T101389-10007	T101389-s2	F117	1280	857	10
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00b627cb5578bb036edb01cdcf7b56d9.jpg	T101389-10003	T101389-s2	F35	1300	867	60
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00f4279089ddc0d40e1470894f827f2e.jpg	T101389-10009	T101389-s2	C5	2048	1365	80
<input type="checkbox"/>	udc-vault/	T101389/scenario2/annotated/00b2add164cb42440a52064e390ea3d2.jpg	T101389-10002	T101389-s2	B1	1280	850	30
<input type="checkbox"/>	udc-	T101389/scenario2/annotated	T101389-10010	T101389-s2	T-100	800	600	10

# Query builder

Visual query

SQL query

Select \* from Spectrum Discover where...

 u2-id LIKE ('%T101389-10005%')

Group by

1 ×

Groups selected

▼

Limit results

10000

Setting a lower limit may increase speed of re

Find the Paring Data (raw-annotated) based on newly-crated file ID “u2-id”: result

Results view:

Matched 2 records from metaocean\_view table in 0.038424 seconds

Condensed

Individual

Inspecting records

2

Grouped By

- ☐ Cluster
- ☐ Datasource
- ☐ Filegroup
- ☐ Filename
- ☐ Fileset

Show more...

filename	u2 id	udc dem2	u2 type	u2 width	u2 height	u2 xmin	u2 xmax
T101389/scenario2 /raw/00c54e200e0d868faac8c55bfca70dbe.jpg	T101389-10005	NULL	V22	1200	1200	NULL	NU
T101389/scenario2/annotated /00c54e200e0d868faac8c55bfca70dbe.jpg	T101389-10005	T101389-s2	V22	1200	1200	647	9'

Items per page: 10

1-2 of 2 items

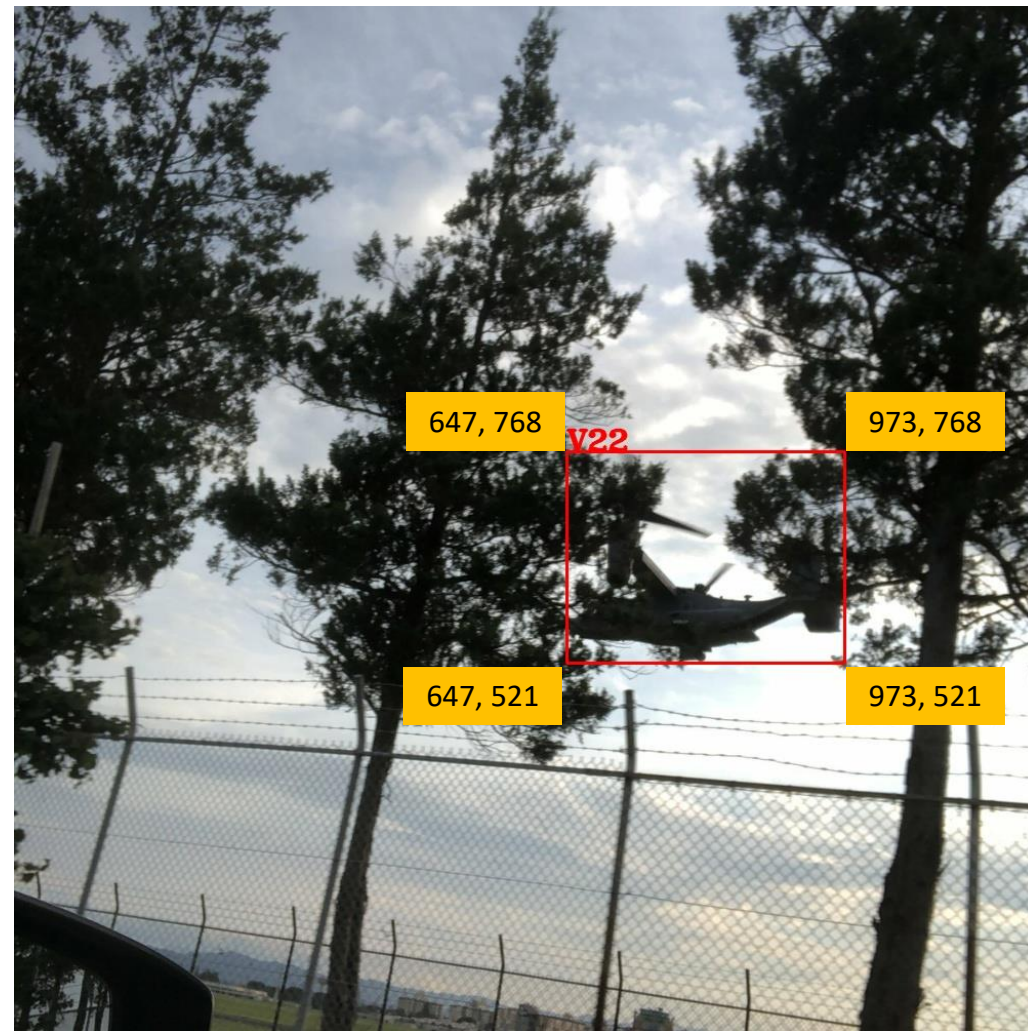
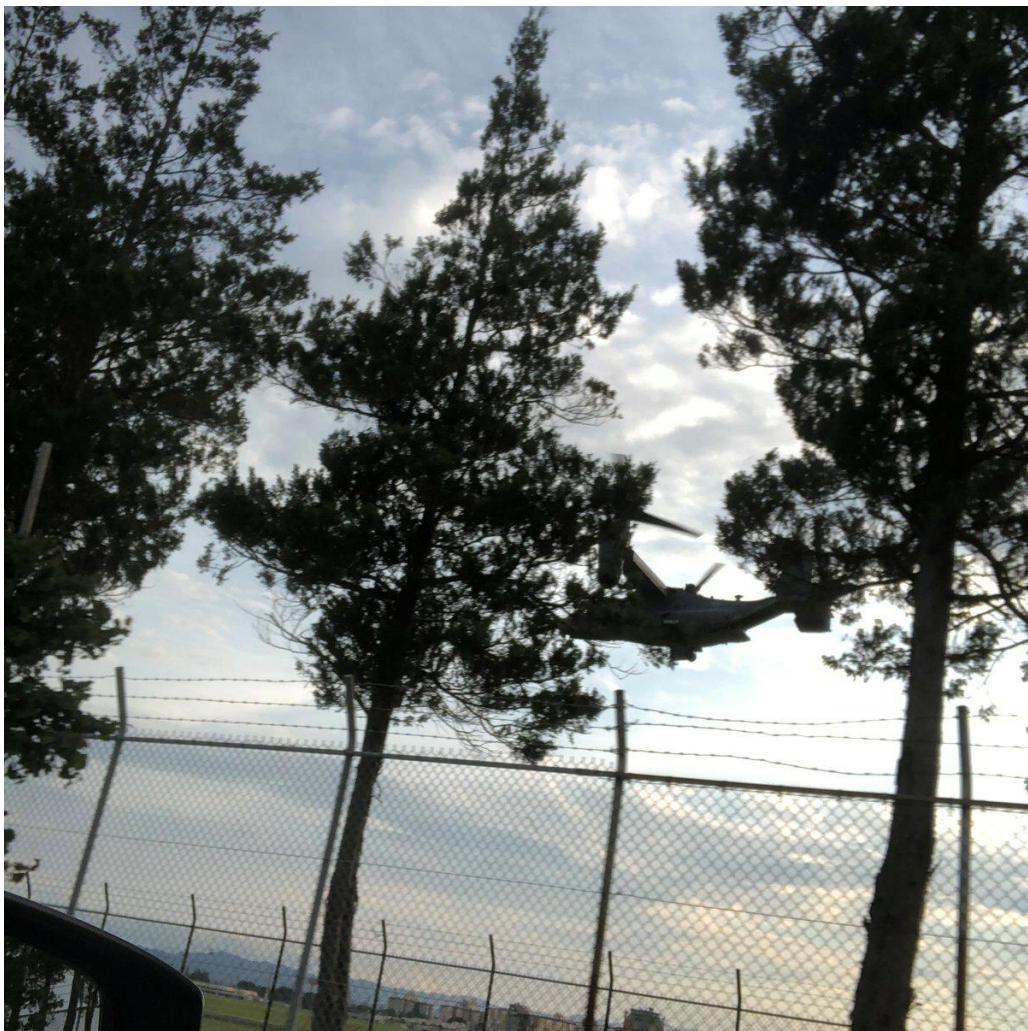
1 of 1 pages

Query builder

u2-id LIKE ('%T101389-10005%')







u2-id = T101389-10005: filename = 00c54e200e0d868faac8c55bfca70dbe.jpg