

Deep Learning Walkthrough - 02

Code in github.com/google-aai/sc17

Cassie Kozyrkov

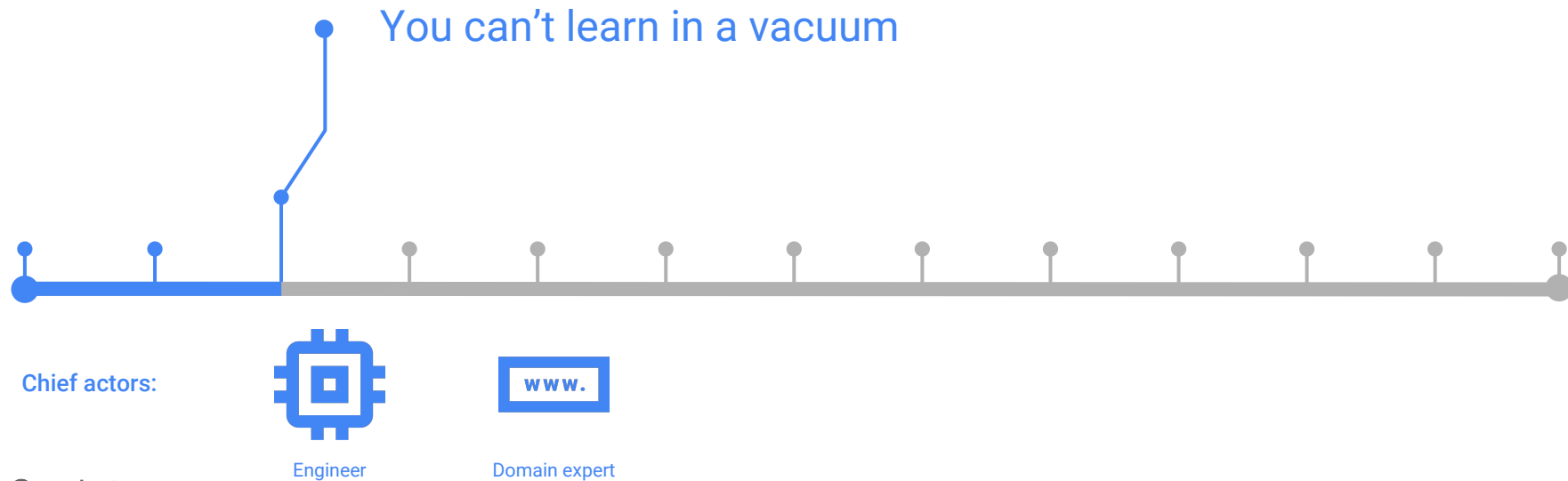
Chief Decision Scientist, Google Cloud

GitHub: [kozyrkov](#); Twitter: [@quaesita](#)

Google Cloud



Step 2 | Get your data





Populate a BigQuery Table

(env) user **r@super-188716-compute-instance:~/sci7/cats\$ sh run_step_2a_query.sh**

sh run_step_2a:query.sh

Waiting on bqjob_r2b58c9818095dc06_0000016075203e0a_1 ... (14s) Current status: DONE

original_url	label	randnum
https://c7.staticflickr.com/9/8894/18277258689_5acf8b0a8a_o.jpg	0	8.526988257706591E-6
https://c2.staticflickr.com/3/2803/4020824567_0b7e36bfcd_o.jpg	0	1.3883631782896089E-5
https://c7.staticflickr.com/4/3318/3188958741_235b507552_o.jpg	1	2.702642935203947E-5
https://farm2.staticflickr.com/6171/6235175628_7f2b84a4fc_o.jpg	0	4.646176122080625E-5
https://c5.staticflickr.com/8/7153/6740118299_1aacb29588_o.jpg	1	6.0176315697990646E-5
https://farm7.staticflickr.com/5346/17204131514_007a763656_o.jpg	0	6.279622240379368E-5
https://c7.staticflickr.com/4/3751/9788632466_aa5204ba9f_o.jpg	1	6.490346933474278E-5
https://farm1.staticflickr.com/2593/4148830705_b01d9c83e8_o.jpg	1	6.60085155750334E-5
https://farm1.staticflickr.com/4045/4218663050_bd64e12b8a_o.jpg	1	8.965109192482501E-5
https://c1.staticflickr.com/4/3200/2350820461_alf528269d_o.jpg	1	9.404920838229636E-5
https://c2.staticflickr.com/4/3224/2932224208_e799727148_o.jpg	1	1.0307303246426258E-4
https://c8.staticflickr.com/8/7105/7364627244_5ef122e36a_o.jpg	0	1.1777178603544769E-4
https://farm6.staticflickr.com/8109/8657170264_72a8146898_o.jpg	0	1.5044281923115577E-4
https://farm1.staticflickr.com/4034/4613672388_402a6de86c_o.jpg	0	1.5933507039811445E-4
https://farm4.staticflickr.com/195/499321718_b13b311e45_o.jpg	0	1.673010517302398E-4
https://farm3.staticflickr.com/7726/17339965475_e681255eb0_o.jpg	0	1.8154501185296823E-4
https://c1.staticflickr.com/1/67/203231915_df34a12f3d_o.jpg	1	1.880243997225417E-4
https://farm3.staticflickr.com/35/124377903_8d2463be2d_o.jpg	1	1.9661932271120008E-4
https://c4.staticflickr.com/4/3012/2947965305_d617988305_o.jpg	0	2.3681323217839E-4
https://c1.staticflickr.com/4/3644/3559941164_de8840e814_o.jpg	0	2.5992094483573425E-4
https://c2.staticflickr.com/3/2746/4479280283_0937d4f1e7_o.jpg	1	2.6391619407029054E-4
https://farm6.staticflickr.com/6160/6145126622_dbc68ec602_o.jpg	0	2.68379707281996E-4
https://c2.staticflickr.com/9/8264/8666029623_caa21476ea_o.jpg	1	2.7360821774990995E-4
https://c7.staticflickr.com/1/171/470614612_79aae80715_o.jpg	0	2.8884169378939895E-4
https://farm6.staticflickr.com/3856/14394042358_04e8040e77_o.jpg	0	2.974360479515159E-4
https://farm5.staticflickr.com/8610/16181928586_bc12b486f4_o.jpg	0	2.9849741811061037E-4
https://farm4.staticflickr.com/5612/15559754015_981c5b64b0_o.jpg	1	2.993901183343528E-4
https://c2.staticflickr.com/6/5084/5236877415_316d4398ed_o.jpg	1	3.080053757211765E-4
https://c3.staticflickr.com/1/153/379515012_9a99bb1584_o.jpg	1	3.1225777428489643E-4
https://farm4.staticflickr.com/5922/22224027846_2222270067_o.jpg	0	3.192581288602326E-4

Populate a BigQuery table [Behind the scenes]



Home



Compute Engine



SQL



Storage



Billing



BigQuery



ML Engine

PRODUCTS ^



Cloud Launcher



Billing



APIs & services



Support



Getting started



IAM & admin

COMPUTE



App Engine

browser

UPLOAD FILES

UPLOAD FOLDER

CREATE FOLDER

REFRESH

SHARE PUBLICLY

DELETE

Filter by prefix...

buckets / sc17bucket

Name	Size	Type	Storage class	Last modified	Share publicly
cats/	—	Folder	—	—	
	5.39 KB	application/octet-stream	Multi-Regional	10/22/17, 4:29 PM	
	288 B	text/plain	Multi-Regional	10/22/17, 4:29 PM	
setup_jupyter.sh	1,020 B	text/x-sh	Multi-Regional	10/22/17, 4:29 PM	
taxi/	—	Folder	—	—	

COMPOSE QUERY

Query History

Job History

Filter by ID or label



sc17

No datasets found in this project.


Please create a dataset or select a new project from the menu above.

Welcome to BigQuery!

BigQuery is a web service that lets you do interactive analysis of massive datasets—up to 100 TB. Simple, scalable and easy to use, BigQuery lets developers and businesses tap into powerful

To get started, here are some options:

- Read our [BigQuery start guide](#)
- Run a query against our sample data by clicking "Compose Query"

Load some of your own data into a table using the  menu on the

[Actions in BigQuery](#)

UI, see the [BigQuery Web UI guide](#)

Create new dataset

Switch to project

Refresh

► nyc-tlc

▼ Public Datasets

► bigquery-public-data:hacker_news

► bigquery-public-data:noaa_gsod

► bigquery-public-data:samples

► bigquery-public-data:usa_names

► gdel-bq:hathitrustbooks

► gdel-bq:internetarchivebooks

► lookerdata:cds

Google Cloud



COMPOSE QUERY

Query History

Job History

Filter by ID or label

sc17

▶ caturday

▶ nyc-tlc

▼ Public Datasets

▶ bigquery-public-data:hacker_news

▶ bigquery-public-data:noaa_gsod

▶ bigquery-public-data:samples

▶ bigquery-public-data:usa_names

▶ gdelt-bq:hathitrustbooks

▶ gdelt-bq:internetarchivebooks

▶ lookerdata:cdc

New Query ?

Query Editor

UDF Editor



SQL

```
1 WITH all_images_and_labels AS (  
2   SELECT i.original_url, l.label_name, l.confidence  
3   FROM `bigquery-public-data.open_images.images` i  
4   JOIN `bigquery-public-data.open_images.labels` l  
5   ON i.image_id = l.image_id  
6 )  
7 SELECT original_url, label, RAND() as randnum  
8 FROM  
9 (  
10  SELECT DISTINCT original_url, 1 as label  
11  FROM all_images_and_labels  
12  WHERE confidence = 1  
13  AND label_name LIKE '/m/01yrx'  
14  UNION ALL  
15  (  
16    SELECT DISTINCT all_images.original_url, 0 as l  
17    FROM all_images_and_labels all_images  
18    LEFT JOIN  
19    (  
20      SELECT original_url  
21      FROM all_images_and_labels  
22      WHERE confidence = 1  
23      AND NOT (label_name LIKE '/m/01yrx')  
24    ) not_cat  
25    ON all_images.original_url = not_cat.original_url  
26    WHERE not_cat.original_url IS NULL  
27    LIMIT 40000  
28  )  
29 )  
30 ORDER BY randnum
```

Error: Encountered " "WITH" "WITH "" at line 1, column 1. Was expecting: <EOF> [Try using standard SQL (<https://cloud.google.com/bigquery/docs/reference/standard-sql/enabling-standard-sql>)]

RUN QUERY

Save Query

Save View

Format Query

Show Options



COMPOSE QUERY

The query uses a WITH clause to **pre-run a query** before running the rest of the SELECT portion below.

The subsequent select statement contains a **union** of two queries.

New Query

```
1 WITH all_images_and_labels AS (  
2   SELECT i.original_url, l.label_name, l.confidence  
3   FROM `bigquery-public-data.open_images.images`  
4   JOIN `bigquery-public-data.open_images.labels`  
5   ON i.image_id = l.image_id  
6 )  
7 SELECT original_url, label, RAND() as randnum  
8 FROM  
9 (  
10  SELECT DISTINCT original_url, 1 as label  
11  FROM all_images_and_labels  
12  WHERE confidence = 1  
13  AND label_name LIKE '/m/0  
14  UNION ALL  
15  (  
16    SELECT DISTINCT all_images.original_url, 0 as l  
17    FROM all_images_and_labels all_images  
18    LEFT JOIN  
19    (  
20      SELECT original_url  
21      FROM all_images_and_labels  
22      WHERE confidence = 1  
23      AND NOT (label_name LIKE '/m/01yrx')  
24    ) not_cat  
25    ON all_images.original_url = not_cat.original_url  
26    WHERE not_cat.original_url IS NULL  
27    LIMIT 40000  
28  )  
29 )  
30 ORDER BY randnum
```

We are joining two tables:
an **images** table and a **labels** table.

Both tables contain image_id, which
allows us to join them on this field.

First piece selects all labeled **cat** examples.

Confidence = 1
means hand-labeled.

Output a random
number, we'll need it.

The label_name '/m/01yrx' is
associated with the description "Cat"
and can be verified by running this
query against the dict table:

```
SELECT label_display_name, label_name  
FROM  
`bigquery-public-data.open_images.dict`  
WHERE label_display_name like 'Cat'
```

Second piece selects the first
40000 rows of examples of all
hand-labeled images not
tagged as cat. These are our
not-cat examples.

Error: Encountered " "WITH" "WITH "" at line 1, column 1. Was expecting: <EOF> [Try using standard SQL
(<https://cloud.google.com/bigquery/docs/reference/standard-sql/enabling-standard-sql>)]

RUN QUERY

Save Query

Save View

Format Query

Show Options



COMPOSE QUERY

Query History

Job History

Filter by ID or label



sc17

▶ caturday

▶ nyc-tlc

▼ Public Datasets

▶ bigquery-public-data:hacker_news

▶ bigquery-public-data:noaa_gsod

▶ bigquery-public-data:samples

▶ bigquery-public-data:usa_names

▶ gdelt-bq:hathitrustbooks

▶ gdelt-bq:internetarchivebooks

▶ lookerdata:cdc

```
19 (
20   SELECT original_url
21   FROM all_images_and_labels
22   WHERE confidence = 1
23   AND NOT (label_name LIKE '/m/01yrx')
24   ) not_cat
25   ON all_images.original_url = not_cat.original_url
26   WHERE not_cat.original_url IS NULL
27   LIMIT 40000
28 )
29 )
30 ORDER BY randnum
```

Error: Encountered " "WITH" "WITH" "" at line 1, column 1. Was expecting: <EOF> [Try using standard SQL (<https://cloud.google.com/bigquery/docs/reference/standard-sql/enabling-standard-sql>)]

Destination Table

Select Table

No table selected

Write Preference

☒ Write if empty ☐ Append to table ☐ Overwrite

Results Size

☐ Allow Large Results ?

Results Schema

☒ Flatten Results ?

Query Caching

☒ Use Cached Results ?

Query Priority

☒ Interactive ☐ Batch ?

UDF Source URIs

Edit ?

Maximum Billing Tier

Project Default ?

Maximum Bytes Billed

Project Default ?

SQL Dialect

☒ Use Legacy SQL ?

RUN QUERY

Save Query

Save View

Format Query

Hide Options

Select any table name you like, but note that if you run a query and want to edit+rerun, you'll need to first delete the table. Use the left-hand menu.

COMPOSE QUERY

Query History

Job History

Filter by ID or label



sc17



▶ caturday

▶ nyc-tlc

▼ Public Datasets

▶ bigquery-public-data:hacker_news

▶ bigquery-public-data:noaa_gsod

▶ bigquery-public-data:samples

▶ bigquery-public-data:usa_names

▶ gdelt-bq:hathitrustbooks

▶ gdelt-bq:internetarchivebooks

▶ london-taxis

```
19 (
20   SELECT original_url
21   FROM all_images_and_labels
22   WHERE confidence = 1
23   AND NOT (label_name LIKE '/m/0lyrx')
24   ) not_cat
25   ON all_images.original_url = not_cat.original_url
26   WHERE not_cat.original_url IS NULL
27   LIMIT 40000
28 )
29 )
30 ORDER BY randnum
```

Valid: This query will process 3.86 GB when run.

Destination Table

Select Table

sc17-183415:caturday.catinfo



Write Preference

☒ Write if empty☐ Append to table☐ Overwrite table

Results Size

☐ Allow Large Results ?

Results Schema

☒ Flatten Results ?

Query Caching

☐ Use Cached Results ?

Query Priority

☒ Interactive☐ Batch ?

UDF Source URIs

Edit ?

Maximum Billing Tier

Project Default ?

Maximum Bytes Billed

Project Default ?

SQL Dialect

☐ Use Legacy SQL ?

RUN QUERY

Save Query

Save View

Format Query

Hide Options

Google Cloud



Public Datasets

- bigquery-public-data:hacker_news
- bigquery-public-data:noaa_gsod
- bigquery-public-data:samples
- bigquery-public-data:usa_names
- gdelt-bq:hathitrustbooks
- gdelt-bq:internetarchivebooks
- lookerdata:cdc

```
12 WHERE confidence = 1
13 AND label_name LIKE '/m/0lyrx'
14 UNION ALL
15 (
16 SELECT DISTINCT all_images.original_url, 0 as label
```

Valid: This query will process 3.86 GB when run.

Destination Table Select Table sc17-183415:caturday.catinfo ×

Write Preference ☒ Write if empty ☐ Append to table ☐ Overwrite table

Results Size ☐ Allow Large Results ?

Results Schema ☒ Flatten Results ?

Query Caching ☐ Use Cached Results ?

Query Priority ☒ Interactive ☐ Batch ?

UDF Source URIs Edit ?

Maximum Billing Tier Project Default ?

Maximum Bytes Billed Project Default ?

SQL Dialect ☐ Use Legacy SQL ?

RUN QUERY Save Query Save View Format Query Hide Options Query complete (14.6s elapsed, 3.86 GB processed) ✓

Results Explanation Job Information Download as CSV Download as JSON Save as Table Save to Google Sheets

Row	original_url	label	randnum	
1	https://c8.staticflickr.com/4/3359/4615280607_966caab870_o.jpg	1	1.749116054572397E-5	
2	https://c1.staticflickr.com/3/2794/4086459730_0fb1054cb2_o.jpg	0	1.7994502079510255E-5	
3	https://c1.staticflickr.com/9/8087/8566786907_67c59c434b_o.jpg	0	2.4605481685258113E-5	
4	https://farm5.staticflickr.com/8323/8109857300_9ec1e9fbf7_o.jpg	1	4.6472283419696225E-5	
5	https://c5.staticflickr.com/4/3457/3309470896_cb8fceddba_o.jpg	1	7.413447964088604E-5	

Table JSON First < Prev Rows 1 - 5 of 80231 Next > Last

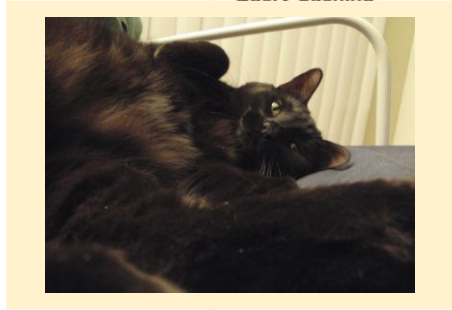
nyc-tlc

Public Datasets

- bigquery-public-data:hacker_news
- bigquery-public-data:noaa_gsod
- bigquery-public-data:samples
- bigquery-public-data:usa_names
- gdelt-bq:hathitrustbooks
- gdelt-bq:internetarchivebooks
- lookerdata:cdc



Query Caching



- Eq...
- Project
- Project De...
- ☐ Use Legacy
- Save View

original_url, 0 as label

sc17-183415:caturday.catinfo X

☐ Append to table ☐ Overwrite table





Results

?

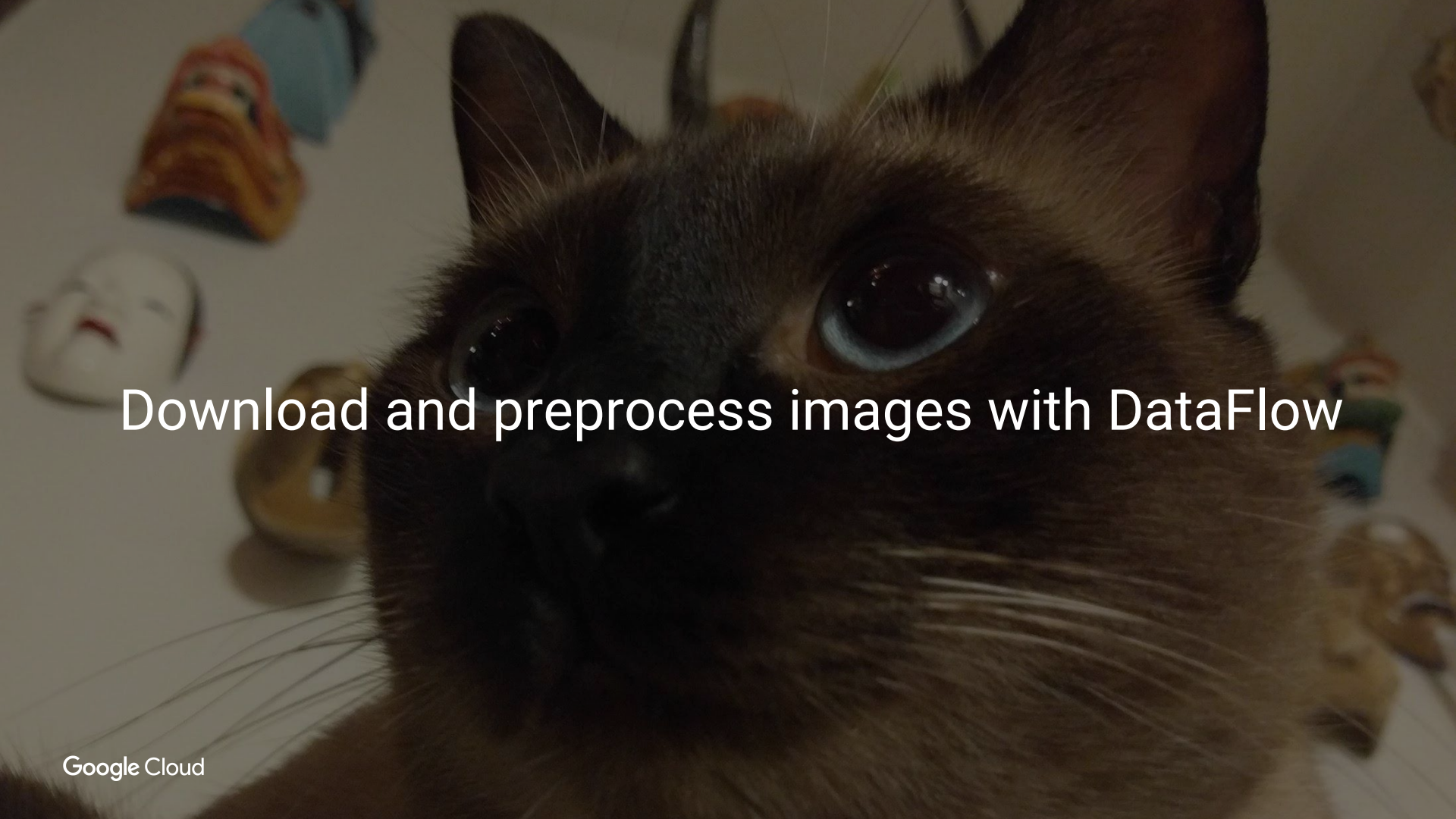


Results	Explanation	Job Information	Download	Download as JSON	Save as Table	Save to Google Sheets
Row	original_url	label	randnum			
1	https://c8.staticflickr.com/4/3359/4615280607_966caab870_o.jpg	1	7491160545...			
2	https://c1.staticflickr.com/3/2794/4086459730_0fb1054cb2_o.jpg	0	7799450...			
3	https://c1.staticflickr.com/9/8087/8566786907_67c59c434b_o.jpg	0	24005481685258113E-5			
4	https://farm5.staticflickr.com/8323/8109857300_9ec1e9fbf7_o.jpg	1	4.6472283419696225E-5			
5	https://c5.staticflickr.com/4/3457/3309470896_cb8fceddba_o.jpg	1	...			

Table JSON First < Prev Rows 1 - 5 of 80231 Next > Last







Download and preprocess images with DataFlow

```
(env) user !super-188716-compute-instance:~/sci7/cats$ sh run_step_2b_get_images.sh $PROJECT dataset catinfo $BUCKET catimages  
No handlers could be found for logger "oauth2client.contrib.multistore_file"
```


```
sh run_step_2b_get_images.sh $PROJECT dataset catinfo $BUCKET catimages
```







```
INFO:root:2017-12-20T18:30:34.043Z: JOB_MESSAGE_DETAILED: (1f4f7cec0d1c28ca): Fusing consumer resize_and_pad_images
into filter_bad_or_absent_images
INFO:root:2017-12-20T18:30:34.074Z: JOB_MESSAGE_DETAILED: (1f4f7cec0d1c2b48): Fusing consumer filter_bad_or_absent_
images into fetch_images_from_urls
INFO:root:2017-12-20T18:30:34.097Z: JOB_MESSAGE_DETAILED: (1f4f7cec0d1c2dc6): Fusing consumer write_images_to_stora
ge into resize_and_pad_images
INFO:root:2017-12-20T18:30:34.121Z: JOB_MESSAGE_DEBUG: (1f4f7cec0d1c2044): Workflow config is missing a default res
ource spec.
INFO:root:2017-12-20T18:30:34.149Z: JOB_MESSAGE_DEBUG: (1f4f7cec0d1c22c2): Adding StepResource setup and teardown t
o workflow graph.
INFO:root:2017-12-20T18:30:34.182Z: JOB_MESSAGE_DEBUG: (1f4f7cec0d1c2540): Adding workflow start and stop steps.
INFO:root:2017-12-20T18:30:34.224Z: JOB_MESSAGE_DEBUG: (1f4f7cec0d1c27be): Assigning stage ids.
INFO:root:2017-12-20T18:30:34.392Z: JOB_MESSAGE_DEBUG: (54dc4c9c134f910d): Executing wait step start3
INFO:root:2017-12-20T18:30:34.458Z: JOB_MESSAGE_BASIC: (54dc4c9c134f9124): Executing operation read_rows_from_cat_i
nfo_table+fetch_images_from_urls+filter_bad_or_absent_images+resize_and_pad_images+write_images_to_storage
INFO:root:2017-12-20T18:30:34.503Z: JOB_MESSAGE_DEBUG: (348e57263115b477): Starting worker pool setup.
INFO:root:2017-12-20T18:30:34.539Z: JOB_MESSAGE_BASIC: (348e57263115b6ad): Starting 50 workers in us-centrall1-f...
INFO:root:2017-12-20T18:30:34.573Z: JOB_MESSAGE_BASIC: (903c4cdd1507102b): BigQuery query issued as job: "dataflow_
job_257583136778705608". You can check its status with the bq tool: "bq show -j --project_id=super-188716 dataflow_
job_257583136778705608".
INFO:root:Job 2017-12-20 10_30_29-8607060276961813628 is in state JOB_STATE_RUNNING
INFO:root:2017-12-20T18:30:42.350Z: JOB_MESSAGE_DETAILED: (6199526dfc07429f): Autoscaling: Raised the number of wor
kers to 0 based on the rate of progress in the currently running step(s).
INFO:root:2017-12-20T18:30:58.331Z: JOB_MESSAGE_DETAILED: (6199526dfc0744c4): Autoscaling: Raised the number of wor
kers to 46 based on the rate of progress in the currently running step(s).
INFO:root:2017-12-20T18:30:58.350Z: JOB_MESSAGE_DETAILED: (6199526dfc07470a): Resized worker pool to 46, though goa
l was 50. This could be a quota issue.
INFO:root:2017-12-20T18:31:03.652Z: JOB_MESSAGE_DETAILED: (6199526dfc074022): Autoscaling: Raised the number of wor
kers to 48 based on the rate of progress in the currently running step(s).
INFO:root:2017-12-20T18:31:03.680Z: JOB_MESSAGE_DETAILED: (6199526dfc074268): Resized worker pool to 48, though goa
l was 50. This could be a quota issue.
INFO:root:2017-12-20T18:31:08.996Z: JOB_MESSAGE_DETAILED: (6199526dfc0744a3): Autoscaling: Raised the number of wor
kers to 50 based on the rate of progress in the currently running step(s).
```


 Error Reporting


TOOLS

 Container Registry > Source Repositories > Deployment Manager Endpoints

BIG DATA

 BigQuery  Pub/Sub > Dataproc > Dataflow  ML Engine  > IoT Core Genomics >

Browser

 CREATE BUCKET REFRESH DELETE

SHOW INFO PANEL

Filter by prefix...

Columns ▾

Buckets

<input type="checkbox"/>	Name	Default storage class [?]	Location	Lifecycle [?]	Labels [?]	Requester pays [?]	
<input type="checkbox"/>	super-188716-bucket	Regional	US-EAST1	None		 Off	



Dataflow

Jobs

[+ CREATE JOB FROM TEMPLATE](#)

Filter jobs



Name	Type	End time	Elapsed time	Start time	Status	ID	Region
 beamapp- user 1220183025-051783	Batch	—	4 min 49 sec	Dec 20, 2017, 1:30:30 PM	Running	2017-12-20_10_30_29-8607060276961813628	us-central1

beamapp-user-1220183025-051783

LOGS

Job

Job summary

Job name	beamapp- user -1220183025-051783
Job ID	2017-12-20_10_30_29-8607060276961813628
Region ?	us-central1
Job status	Running
	<button>Stop job</button>
SDK version	Apache Beam SDK for Python 2.2.0
Job type	Batch
Start time	Dec 20, 2017, 1:30:30 PM
Elapsed time	5 min 5 sec

Autoscaling

Workers	50
Current state	Autoscaling: Raised the number of workers to 50 based on the rate of progress in the currently running step(s).

Dec 20, 2017 1:30 PM





Compute Engine



VM instances



Instance groups



Instance templates



Disks



Snapshots



Images



Committed use discounts



Metadata



Health checks



Zones



Operations



Quotas



Settings

VM instances

[+ CREATE INSTANCE](#)[SHOW INFO PANEL](#)

Filter VM instances



Columns

<< Previous

1

2

Next >>

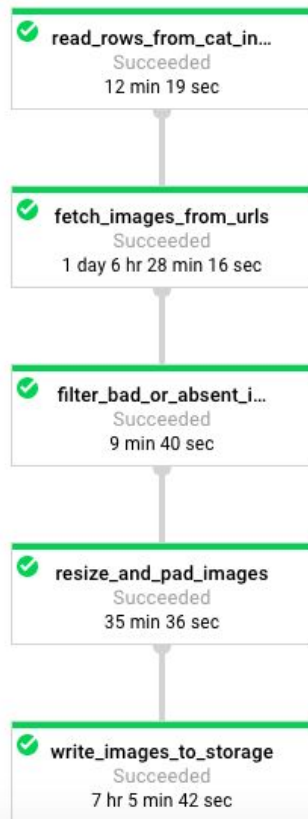
<input type="checkbox"/>	Name ^		Zone	Recommendation	Internal IP	External IP	C
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-0mh1	us-central1-f		10.128.0.17	146.148.66.78	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-1774	us-central1-f		10.128.0.9	35.193.70.197	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-1gsv	us-central1-f		10.128.0.10	130.211.170.121	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-29j7	us-central1-f		10.128.0.18	35.225.153.200	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-3573	us-central1-f		10.128.0.3	35.225.213.193	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-3bdz	us-central1-f		10.128.0.21	35.184.242.165	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-3q4q	us-central1-f		10.128.0.27	35.202.242.32	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-45sg	us-central1-f		10.128.0.46	130.211.144.69	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-4c99	us-central1-f		10.128.0.36	35.226.191.198	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-4lfl	us-central1-f		10.128.0.15	35.192.106.255	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-6m1k	us-central1-f		10.128.0.47	35.194.57.153	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-6rs2	us-central1-f		10.128.0.7	35.225.48.206	\$
<input type="checkbox"/>	✓ beamapp- <input type="text" value="user"/>	12201830-12201030-2658-harness-8blj	us-central1-f		10.128.0.20	35.188.209.63	\$ ²⁰



beamapp-[user]-1220183025-051783

LOGS

Job



Job summary

Job name	beamapp-[user]-1220183025-051783
Job ID	2017-12-20_10_30_29-8607060276961813628
Region ?	us-central1
Job status	✓ Succeeded
SDK version	Apache Beam SDK for Python 2.2.0
Job type	Batch
Start time	Dec 20, 2017, 1:30:30 PM
Elapsed time	25 min 34 sec

Autoscaling

Workers	0
Current state	Autoscaling: Raised the number of workers to 50 based on the rate of progress in the currently running step(s).

Dec 20, 2017 1:30 PM





Compute Engine



VM instances



Instance groups



Instance templates



Disks



Snapshots



Images



Committed use discounts



Metadata



Health checks



Zones



Operations



Quotas



Settings

VM instances

[+ CREATE INSTANCE](#)[SHOW INFO PANEL](#)

Filter VM instances



Columns



Name ^

Zone

Recommendation

Internal IP

External IP

Connect



super-188716-compute-instance

us-east1-c

10.142.0.2

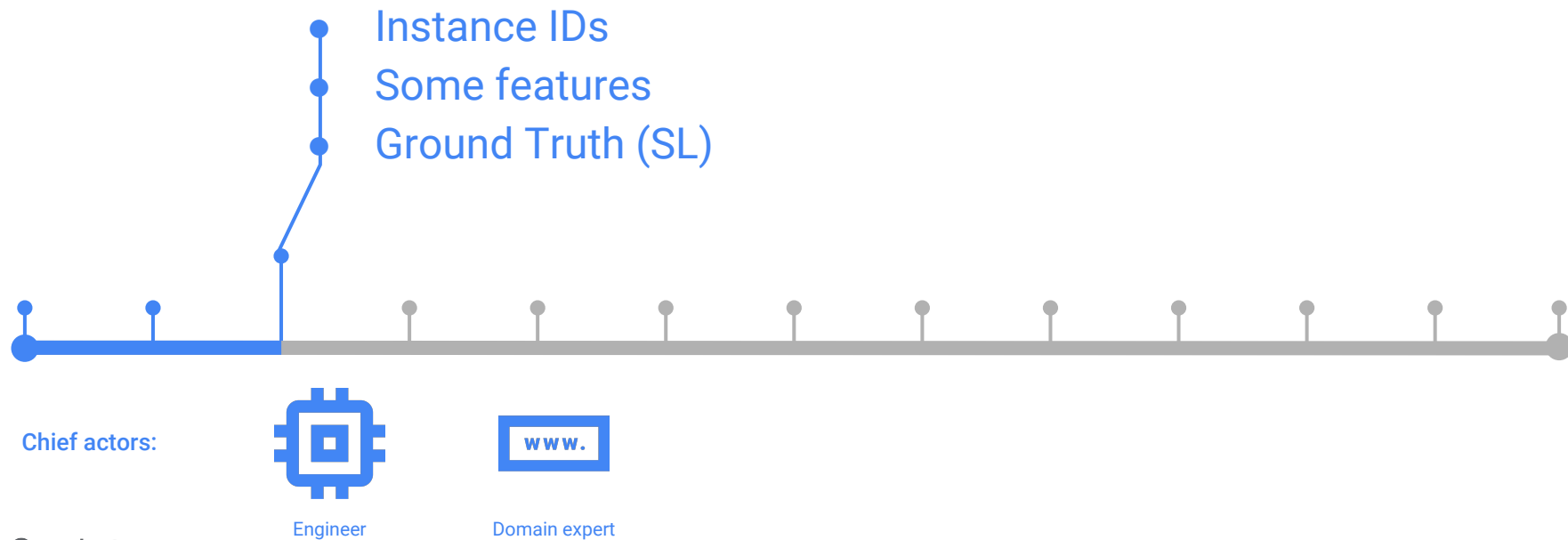
35.196.157.144



SSH



Step 2 is finished | You now have code for gathering



Step 2 is finished | You now have code for gathering

