

Looking ahead: What comes after Airflow 2.0?



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The Road so Far...

Airflow Timeline



Airflow Today



Active

Top 5 Apache project
repositories by commits
in 2020



Collaborative

+1,500 code authors



Supportive

Continued active
releases for v1 and v2



Popular

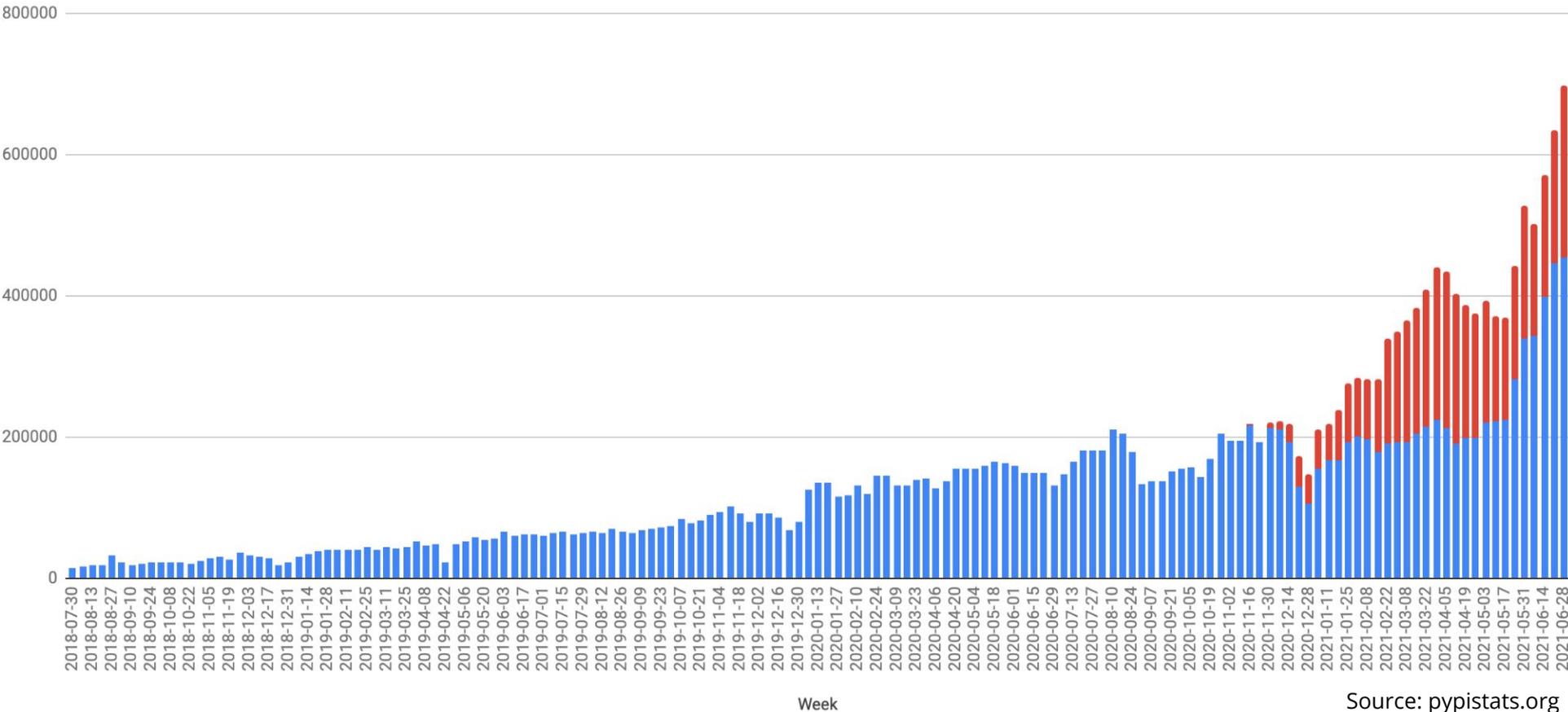
Hundreds of companies
using Airflow in the
wild

Airflow Today

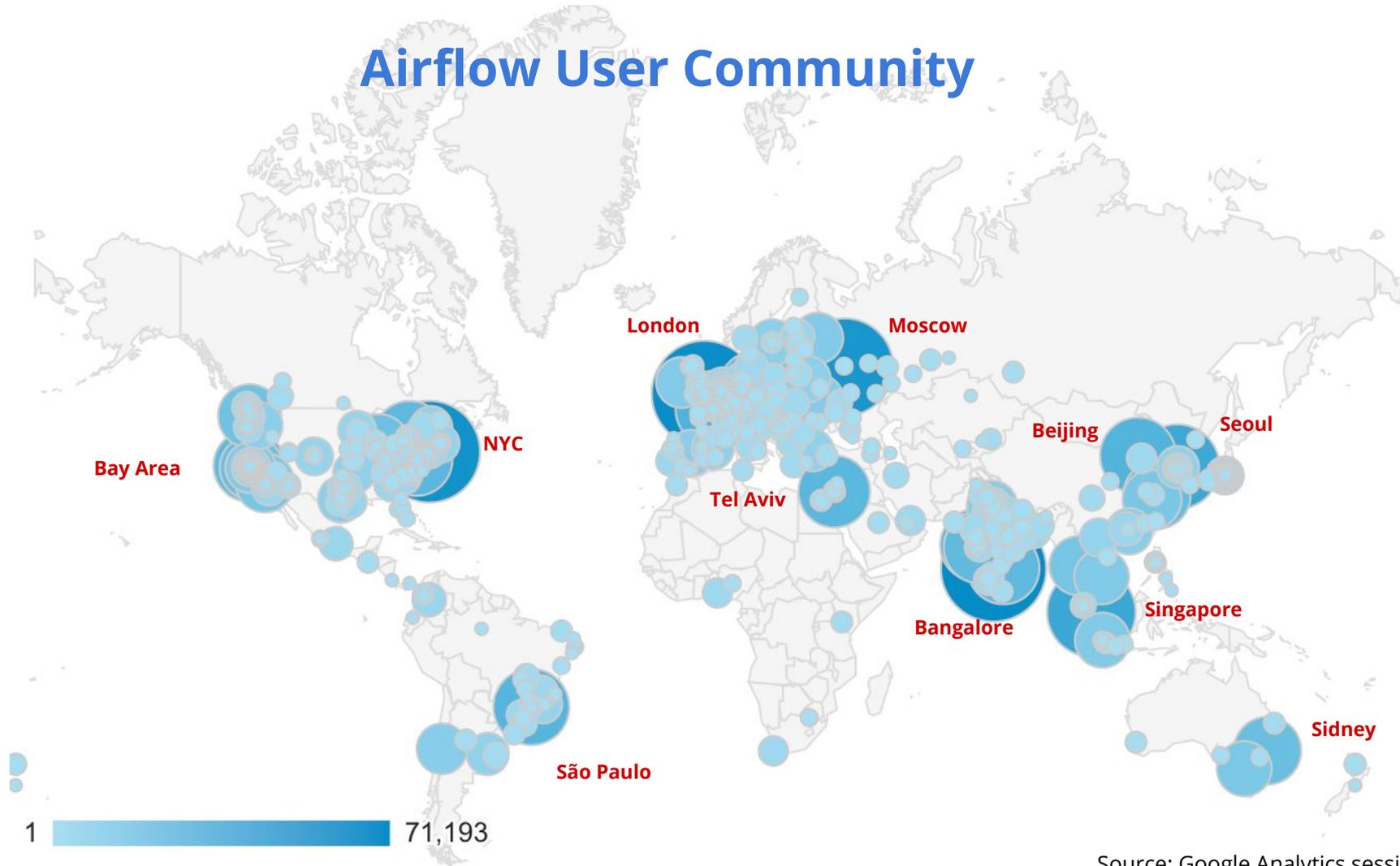


Downloads of Airflow packages per week

■ v2 ■ v1



Airflow User Community



Source: Google Analytics sessions

Community > Code

Community > Code



Airflow Summit 2020

~6000 registrations

X Sponsors

31 Committers

21 PMC members

Airflow Summit 2021

~9000 registrations

XX sponsors

44 Committers

24 PMC members

Transition

Apache Airflow 2.2 and beyond

We build our computer
(systems) the way we build
our cities: over time, without
a plan, on top of ruins

— *Ellen Ulman*





Roadmap: A possible future

Making DAGs a joy to write

**Airflow should be the go to
orchestrator for *every* data
workflow job**

**Airflow should be easier to
operate confidently**

Roadmap Concepts

- Making DAGs a joy to write
- Airflow should be the go to orchestrator for every data workflow job
- Airflow should be easier to operate confidently

Airflow 2.2

The image features a title card for 'Airflow 2.2'. The text is rendered in a clean, white, sans-serif font, positioned on the left side of the frame. The background is a scenic landscape at dusk or dawn, with a sky transitioning from deep purple at the top to a soft pink and orange near the horizon. Below the horizon, a range of dark, silhouetted mountains is visible, with some peaks appearing to have snow or light-colored patches. The overall mood is serene and professional.

AIP-39: Run DAGs on customizable schedules

Why AIP-39

**AIP-40: Any operator can
"defer" itself**

Why AIP-40

A wide-field photograph of the night sky, capturing the Milky Way galaxy. The galaxy's core is visible as a bright, glowing band of light stretching across the middle of the frame, with colors ranging from white and yellow to deep red and purple. The surrounding sky is filled with countless stars, some appearing as sharp points of light and others as faint, diffuse clouds. In the foreground, the dark silhouettes of trees and a structure, possibly a telescope or a building, are visible against the starry background. The overall scene is a breathtaking view of our home galaxy.

The near future

Where's the new UI?

AIP-38

Adding missing API endpoints *first*

Don't want to ask people to not
contribute new UI features

Nor do we want to chase a moving
target

airflowctl: CLI over the API

Untrusted workers

**DAG/task lifecycle hooks
and easier notifications**

Dynamic DAGs

```
@task
def get_files_from_s3():
    ...

my_files = get_files_from_s3()
s3_delete_files = S3DeleteObjectsOperator.partial(
    aws_conn_id="my-aws-conn-id",
    bucket="my-bucket"
).map(key=my_files)
```

Add screenshot for previous

```
@dag
def my_dag(markets: list[str], campaigns: dict[str, list[int]]):
    @task
    def ingest(market):
        ...

    @task
    def calculate_roi(market, campaign):
        ...

    @task
    def aggregate_rois(market, campaign_rois):
        total = 0
        n = 0
        for campaign_roi in campaign_rois:
            n += 1
            total += campaign_roi
        return campaign_roi/total

data = ingest.map(markets)
rois = calculate_roi.map(market, data)
stats = aggregate_rois(market, rois)
```

A better cross-DAG story

Looking further ahead



Event triggered DAGs

DAG versioning

Easier DAG deployment

Streaming

New concept: a Data object

Better support for Machine Learning



Airflow 3.0?