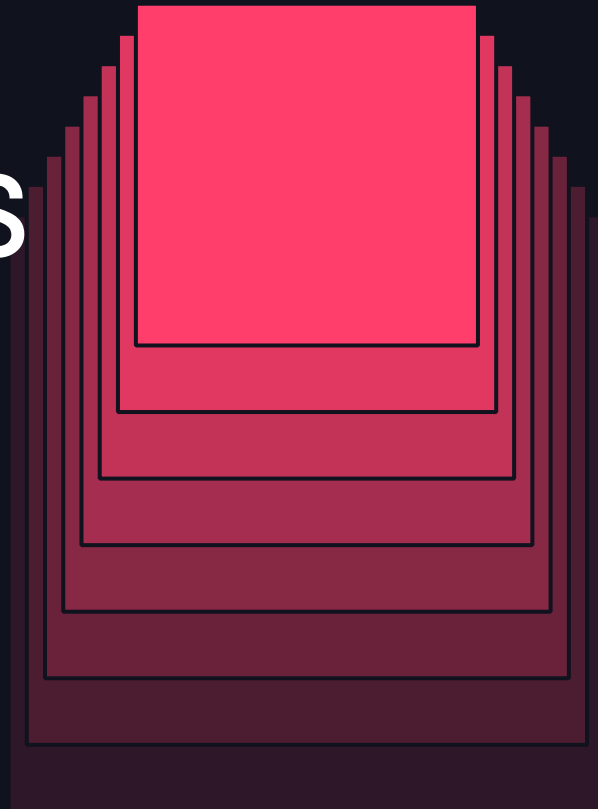


# APPS ON DATABRICKS

(D24DBX2745B)



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Nick Kramer & Andre Furlan Bueno  
6/12/2024

# Data is a team sport



Dan the Data Scientist



Sales data by  
customer, region,  
and product mix

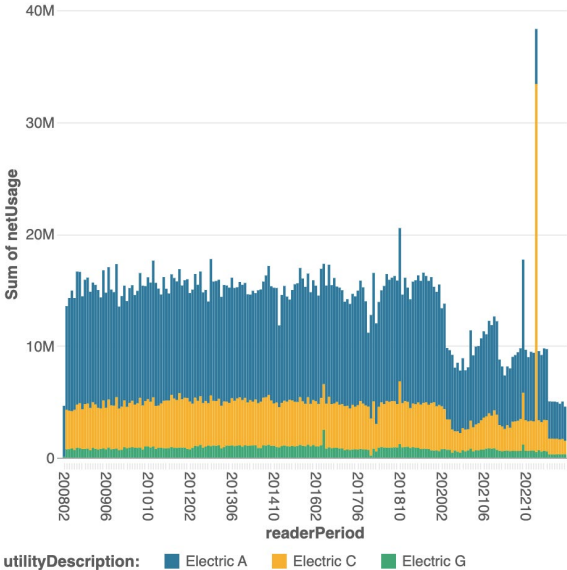
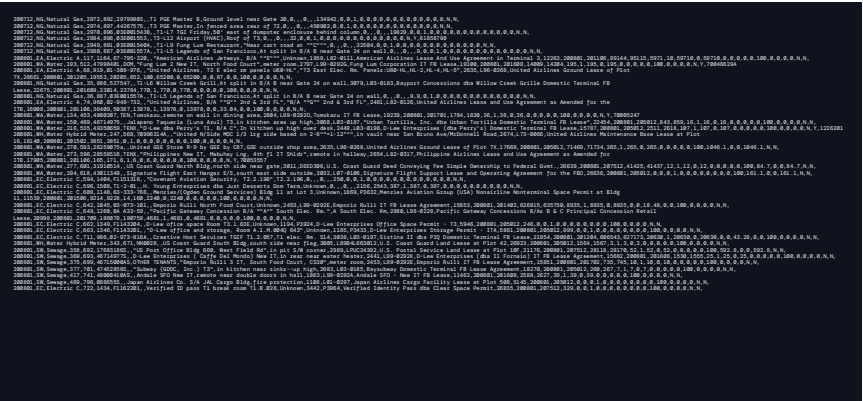


Sarah the Sales Exec

# What's Sarah supposed to do with this?

```
200712,NG,Natural Gas,2972,892,29799803,,T1 PGE Master B,Ground level near Gate 20,,0,,134942,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,N,N,
200712,NG,Natural Gas,2974,897,44267575,,T3 PGE Master,In fenced area rear of T2,,0,,450902,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,N,N,
200712,NG,Natural Gas,2970,896,03E0015438,,T1-L7 TGI Friday,50' east of dumpster enclosure behind column,,0,,19829,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,N,N,
200712,NG,Natural Gas,2984,898,03E0015553,,T3-L12 Airport (HVAL),Roof of T3,,0,,32,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,N,N,
200712,NG,Natural Gas,2949,891,03E001540A,,T1-L9 Fung Lung Restaurant,"Near cart road at ""C""",0,,32504,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,N,N,
200712,NG,Natural Gas,2980,887,03E001557A,,T1-L5 Legends of San Francisco,At split in B/A B near Gate 24 on wall,,0,,9,0,0,1,0,0,0,0,0,0,0,0,0,0,0,N,N,
200801,EA,Electric A,117,1164,67-795-320,,American Airlines Jetways, B/A ""E""",Unknown,1958,L82-0111,American Airlines Lease And Use Agreement in Terminal
3,12263,200801,201106,89144,95115,5971,10,59710,0,59710,0,0,0,0,100,0,0,0,0,0,0,N,N,
200801,WA,Water,193,512,47998401,DOM,"Fung Lung 2 New IT, North Food Court",meter room,2797,L99-0292G,Fung Lung Corporation IT FB Lease,19100,200801,201608,14009,14204,195,1,195,0,195,0,0,0,0,100,0,0,0,0,N,N,70046629A
200801,EA,Electric A,68,919,01-308-976,,United Airlines, T3 E elec rm panels U60-HL", "T3 East Elec. Rm. Panels:U60-HL,HL-2,HL-4,HL-5",2635,L96-0268,United Airlines Ground Lease of Plot
7X,26661,200801,201205,19553,20205,652,100,65200,0,65200,0,0,87,0,0,100,0,0,0,0,0,0,N,N,
200801,NG,Natural Gas,35,886,527547,,T1-L6 Willow Creek Grill,At split in B/A B near Gate 24 on wall,3079,L03-0183,Bayport Concessions dba Willow Creek Grille Domestic Terminal FB
Lease,22675,200801,201609,23014,23784,770,1,770,0,770,0,0,0,0,100,0,0,0,0,0,0,N,N,
200801,NG,Natural Gas,36,887,03E001557A,,T1-L5 Legends of San Francisco,At split in B/A B near Gate 24 on wall,,0,,9,9,0,1,0,0,0,0,0,0,0,0,0,0,0,0,N,N,
200801,EA,Electric A,74,900,02-948-732,,United Airlines, B/A ""G"" 2nd & 3rd FL", "B/A ""G"" 2nd & 3rd FL",2461,L82-0126,United Airlines Lease and Use Agreement as Amended for the
ITB,16008,200801,201106,96409,50387,13978,1,13978,0,13978,0,0,33,04,0,0,100,0,0,0,0,0,0,N,N,
200801,WA,Water,134,453,4800307,TEN,Tomokazu,remote on wall in dining area,2804,L99-0292Q,Tomokazu IT FB Lease,19239,200801,201701,1784,1820,36,1,36,0,36,0,0,0,0,100,0,0,0,0,N,N,70005247
200801,WA,Water,150,469,46714975,,Jalapeno Taqueria (Luna Azul) T3,in kitchen area up high,3068,L03-0187,"Urban Tortilla, Inc. dba Urban Tortilla Domestic Terminal FB
Lease",22454,200801,205012,843,859,16,1,16,0,0,0,0,0,0,100,0,0,0,0,0,0,N,N,
200801,WA,Water,216,535,49350659,TENX,"D-Lew dba Perry's T1, B/A C",In kitchen up high over desk,2449,L03-0198,D-Lew Enterprises (dba Perry's) Domestic Terminal FB
Lease,15787,200801,205012,2511,2618,107,1,107,0,107,0,0,0,0,100,0,0,0,0,0,0,N,N,1226201
200801,WH,Water Hybrid Meter,247,568,70996314A,,United N/Side MOC 1/3 lrg side based on 2-8""=1-12""",in vault near San Bruno Ave/McDonnell Road,2674,L73-0066,United Airlines Maintenance Base Lease at Plot
16,18140,200801,201502,3851,3851,0,1,0,0,0,0,0,0,0,100,0,0,0,0,0,0,N,N,
200801,WA,Water,270,593,26259075a,,United GSE Store R-9 by GSE by C87,GSE outside shop area,2635,L96-0268,United Airlines Ground Lease of Plot 7X,17668,200801,205012,71469,71734,265,1,265,0,265,0,0,0,0,100,1046,1,0,N,N,
200801,WA,Water,273,596,26559516,TENX,"Philippines New IT, Mabuhay Lng, 4th Fl IT SHldr",remote in hallway,2654,L82-0317,Philippine Airlines Lease and Use Agreement as Amended for
ITB,17905,200801,201106,185,171,61,0,0,0,0,0,0,0,0,0,100,0,0,0,0,0,0,N,N,
200801,WA,Water,277,601,31910514,,US Coast Guard North Bldg,north side near gate,3011,DEED306,U.S. Coast Guard Deed Conveying Fee Simple Ownership to Federal
Gvmt,26639,200801,207512,41425,41437,12,1,12,0,12,0,0,0,0,100,84,7,0,0,0,84,7,N,N,
200801,WA,Water,294,618,43011349,,Signature Flight East Hangar E/S,south east side outside,3032,L07-0106,Signature Flight Support Lease and Operating Agreement for the
FBO,26636,200801,205012,0,0,0,1,0,0,0,0,0,0,0,0,100,161,1,0,0,161,1,N,N,
200801,EC,Electric C,594,1404,F1151316,,Covenant Aviation Security, T2.2.196",T2.2.196,0,,0,,250,0,0,1,0,0,0,0,0,0,0,0,0,0,0,0,N,N,
200801,EC,Electric C,596,1508,T1-2-01,,H. Young Enterprises dba Just Desserts Dom Term,Unknown,0,,0,,2156,2543,387,1,387,0,387,0,0,0,0,0,0,0,0,0,0,N,N,
200801,EC,Electric C,608,1148,63-333-766,,Menziess/Ogden Ground Services) Bldg 11 at Lot 3,Unknown,1889,P3632,Menzies Aviation Group (USA) Nonairline Nonterminal Space Permit at Bldg
11,11539,200801,201506,9214,9228,14,160,2240,0,2240,0,0,0,0,100,0,0,0,0,0,0,N,N,
200801,EC,Electric C,642,1045,03-073-101,,Emporio Rulli North Food Court,Unknown,2453,L99-0292E,Emporio Rulli IT FB Lease Agreement,15853,200801,201402,626815,635750,8935,0,8935,0,0,18,48,0,0,100,0,0,0,0,N,N,
200801,EC,Electric C,649,1260,BA 438-59,,Pacific Gateway Concession B/A ""A"" South Elec. Rm.", "A" South Elec. Rm.,N,2980,L98-0228,Pacific Gateway Concessions B/As B & C Principal Concession Retail
Lease,20999,200801,201709,186076,190759,4681,1,4681,0,0,0,0,0,0,100,0,0,0,0,0,0,N,N,
200801,EC,Electric C,662,1349,F1143204,,D-Lew office space Room T3,1.63E,Unknown,1194,P3924,D-Lew Enterprises Office Space Permit - T3,5946,200801,205012,246,0,0,1,0,0,0,0,0,0,0,0,100,0,0,0,0,N,N,
200801,EC,Electric C,663,1346,F1143201,,D-Lew office and storage, Room A.1.M.004Q 643",Unknown,1185,P3433,D-Lew Enterprises Storage Permit - ITA,5861,200801,205012,999,0,0,1,0,0,0,0,0,0,0,0,100,0,0,0,0,N,N,
200801,EC,Electric C,711,986,02-973-818A,,Creative Host Services TGIF T1.2.057,T1 elec. Rm. 514,3038,L03-0197,Sistina II dba PIQ Domestic Terminal FB
Lease,21954,200801,201204,606543,627173,20630,1,20630,0,20630,0,0,43,28,0,0,100,0,0,0,0,0,0,N,N,
200801,WH,Water Hybrid Meter,343,671,NN0028,,US Coast Guard South Bldg,south side near flag,3005,L8904L663012,U.S. Coast Guard Land Lease at Plot 42,26923,200801,205012,1564,1567,3,1,3,0,3,0,0,0,0,100,0,0,0,0,N,N,
200801,SW,Sewage,358,682,17683186S,,US Post Office Bldg 660, West Field Rd",in pit S/W corner,2989,LPU24392,U.S. Postal Service Land Lease at Plot 10F,21176,200801,207512,28118,28170,52,1,52,0,52,0,0,0,0,0,0,100,592,8,0,0,592,8,N,N,
200801,SW,Sewage,369,693,46714977S,,D-Lew Enterprises (Caffe Del Mondo) New IT,in rear near water heater,2441,L99-0292K,D-Lew Enterprises (dba Il Fornaio) IT FB Lease
Agreement,15682,200801,201608,1530,1555,25,1,25,0,25,0,0,0,0,100,0,0,0,0,0,0,N,N,
200801,SW,Sewage,375,699,46715000AS,OTHER TENANTS,"Emporio Rulli 9 IT, South Food Court, CS30",meter room,2453,L99-0292E,Emporio Rulli IT FB Lease Agreement,15851,200801,201702,735,745,10,1,10,0,10,0,0,0,0,0,0,100,0,0,0,0,N,N,
200801,SW,Sewage,377,701,47452858S,,Subway (300C, Inc.) T3",in kitchen near sinks-up high,2633,L03-0185,Bayhubway Domestic Terminal FB Lease Agreement,19270,200801,205012,260,267,7,1,7,0,7,0,0,0,0,100,0,0,0,0,N,N,
200801,SW,Sewage,417,741,48000410AS,,Andale SF New IT,remote near double doors in hall,1563,L99-0292A,Andale SFO - New IT FB Lease,11462,200801,201608,2588,2627,39,1,39,0,39,0,0,0,0,0,0,100,3,0,0,0,N,N,
200801,SW,Sewage,469,796,088655S,,Japan Airlines Co. S/A JAL Cargo Bldg,fire protection,1108,L01-0297,Japan Airlines Cargo Facility Lease at Plot 508,5145,200801,205012,0,0,0,1,0,0,0,0,0,0,0,0,100,0,0,0,0,N,N,
200801,EC,Electric C,722,1434,F1162201,,Verified ID pass T1 break room T1.B.028,Unknown,3442,P3964,Verified Identity Pass dba Clear Space Permit,28835,200801,207512,329,0,0,1,0,0,0,0,0,0,0,0,100,0,0,0,0,N,N,
```

# Data apps democratize data

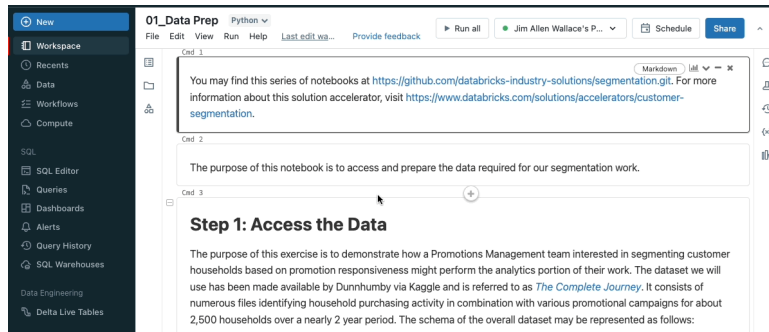


# Dashboards and notebooks are data apps



## Dashboards

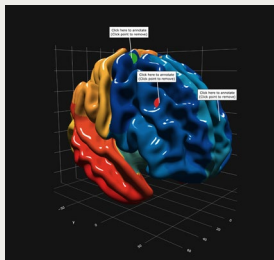
- Visualize structured data
- Sharing with end users
- Low-code authoring



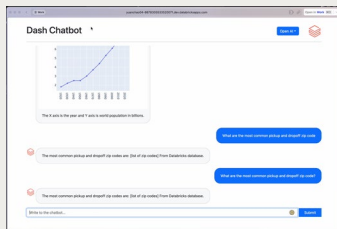
## Notebooks

- Handle arbitrary data and computation
- Quickly edit Python code
- Technical audience

# Other Data Apps



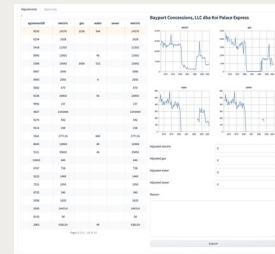
Custom Visualizations



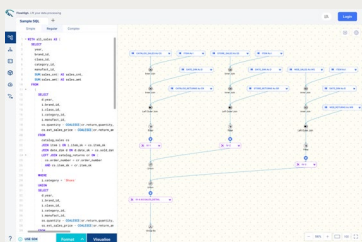
LLM knowledge base



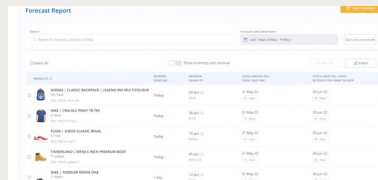
What-if analysis



Workflows & approvals



Data engineering



Forecasting

Source	Target	Match	Diff	Msg
Source 1	Target 1	Match	0.00	
Source 2	Target 2	Match	0.00	
Source 3	Target 3	Match	0.00	
Source 4	Target 4	Match	0.00	
Source 5	Target 5	Match	0.00	
Source 6	Target 6	Match	0.00	
Source 7	Target 7	Match	0.00	
Source 8	Target 8	Match	0.00	
Source 9	Target 9	Match	0.00	
Source 10	Target 10	Match	0.00	

Data reconciliation

```
POST /api/2.0/harvests  
  
{  
  "site": "Morris",  
  "yield": "35",  
  "variety":  
    "Manchuria"  
}
```

APIs

# Databricks has many tools for data

SQL

Spark

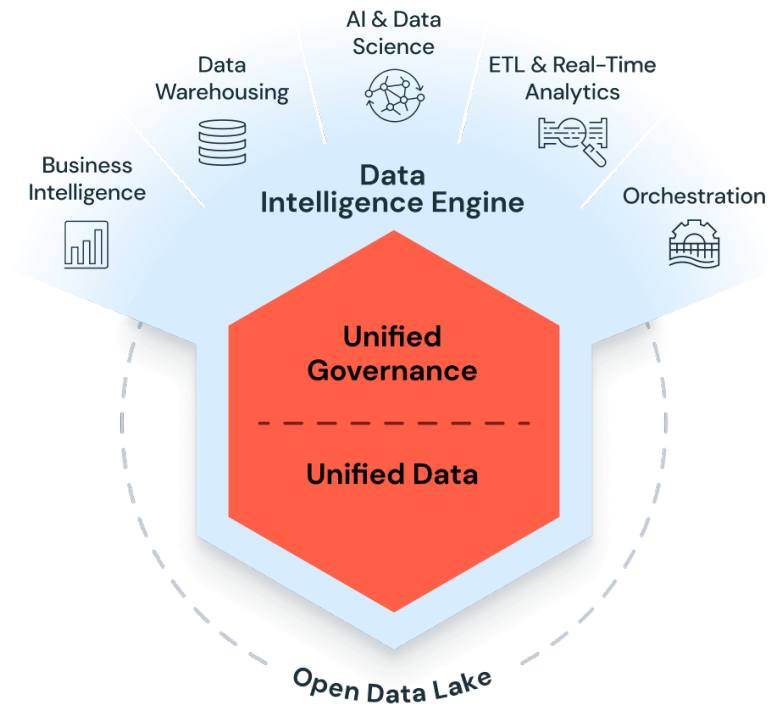
Volumes

Model serving

Vector search

Delta Live Tables

Data Federation



# Apps have been hard to host and share securely

Hard to host



Hard to share



Hard to secure





# Introducing Databricks Custom Apps

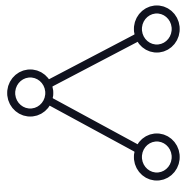
# Databricks Custom Apps

The easiest way to create data apps with built -in security and governance.



Host

Run any Python code in Databricks serverless compute



Share

Share with users who don't use Databricks  
You control all the pixels



Govern

Security built-in  
Integrated access control

# Demo time!

# Best practices

## DO

- Heavy lifting in Databricks, not in your app process
- Use version control (Git folders)
- Have separate dev & production apps

## DON'T

- Put secrets in apps – use credential manager API instead
- Hardcode resource paths – use app.yaml environment variables

# Coming soon

- UI
- Hot reload

E2 Dogfood

Search data, notebooks, recents, and mo... + P

E2 Dogfood ▾

N

New

Workspace

Recents

Catalog

Workflows

Compute

SQL

SQL Editor

Queries

Dashboards

Genie

Alerts

Query History

SQL Warehouses

Data Engineering

Job Runs

Pipelines

Machine Learning

Playground

Experiments

Features

Models

Serving

Apps >

Create App

General

Name\*

demo

Description

0 / 500

Template

Select template

Gradio data app

Gradio chatbot

Dash data app

Streamlit data app

Streamlit chatbot app

Flask

FastAPI

Parent folder

Path to folders that contain apps source code.

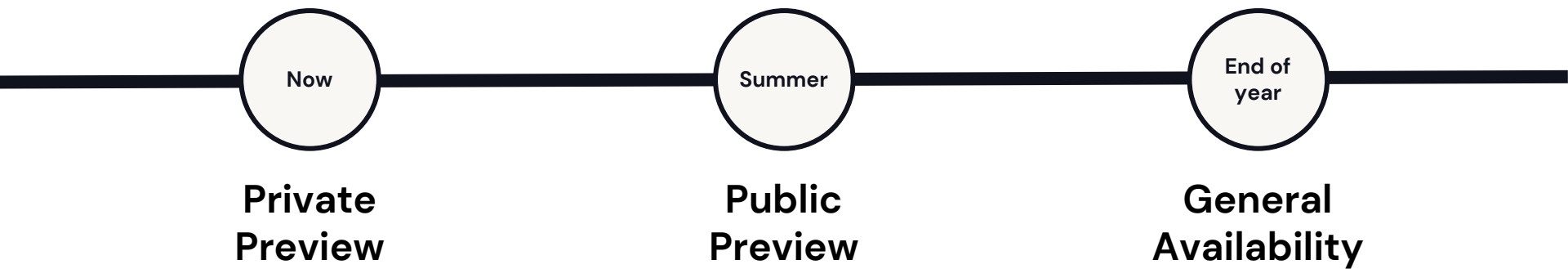
Tags

Optional. You can configure tags later.

Cancel

Create

# Roadmap



# Recap

1. Build an app quickly using Python
2. Host it securely in Databricks serverless compute
3. Share it with non-technical colleagues

# We want your feedback!



<https://bit.ly/custom-app-private-preview-signup>

Reach out to  
[nick.kramer@databricks.com](mailto:nick.kramer@databricks.com) &  
[andre.furlan@databricks.com](mailto:andre.furlan@databricks.com) if you  
want to apply to private preview.



# DATA+AI SUMMIT