



H2O
**FEATURE
STORE**

Co-developed with



AT&T

Operationalizing AI at Scale with H2O Feature Store

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AVP Data & AI

AT&T

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FEATURE
STORE



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Agenda

01

H2O.ai & AT&T Feature Store, an overview

02

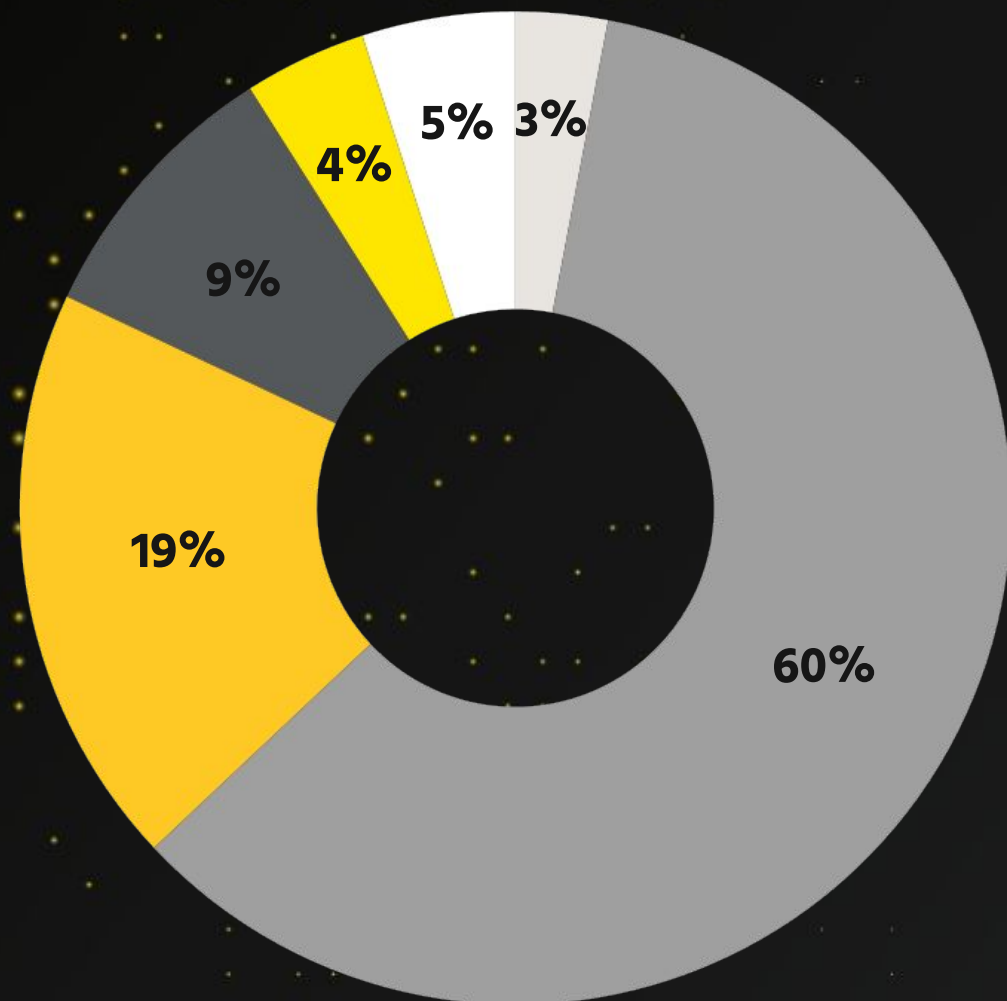
Operationalizing AI at Scale with H2O Feature Store

03

Feature Store & GenAI



Data Preparation Demands



What data scientists spend the most time doing

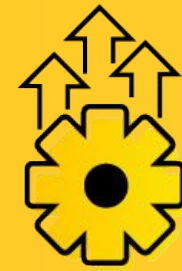
- *Building training sets: 3%*
- *Cleaning and organizing data: 60%*
- *Collecting data sets: 19%*
- *Mining data for patterns: 9%*
- *Refining algorithms: 4%*
- *Other: 5%*

Data scientists spend nearly 80% of their time on data preparation.



The H2O Feature Store

- Optimizes the feature engineering and model building process
- Connects information across platforms
- Establishes consistency and transparency across the machine learning lifecycle
- Brings together the diversity of skill sets needed to deliver transformational value with AI.



Improves operational efficiency.

Reduces duplication of ingestion, storage and computational efforts. Optimizes model production and performance.



Provides security and governance.

Institutes quality, consistency and transparency. Automates data versioning and tracking of model lineage.



Ensures accuracy and reliability.

Establishes a single source of truth for data. Creates superior feature sets with integrated human feedback loops.



Promotes AI collaboration.

Improves access to and sharing of features across all machine learning pipelines. Maintains alignment across teams.

Cloud and other Data Sources

Data Ingest



H2O FEATURE STORE

Transform



Feature engineering
Version controls
Role-based permissions

Recommend



Related features
Feature updates
New features

Monitor



Data drift
Model lineage
Bias identification

Serve



Batch
In-stream
On demand

Consume



SQL | GUI | BI
Python Notebook



Data & ML Engineers



Data Scientists



Business Analysts

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From Data Clouds to AI Clouds

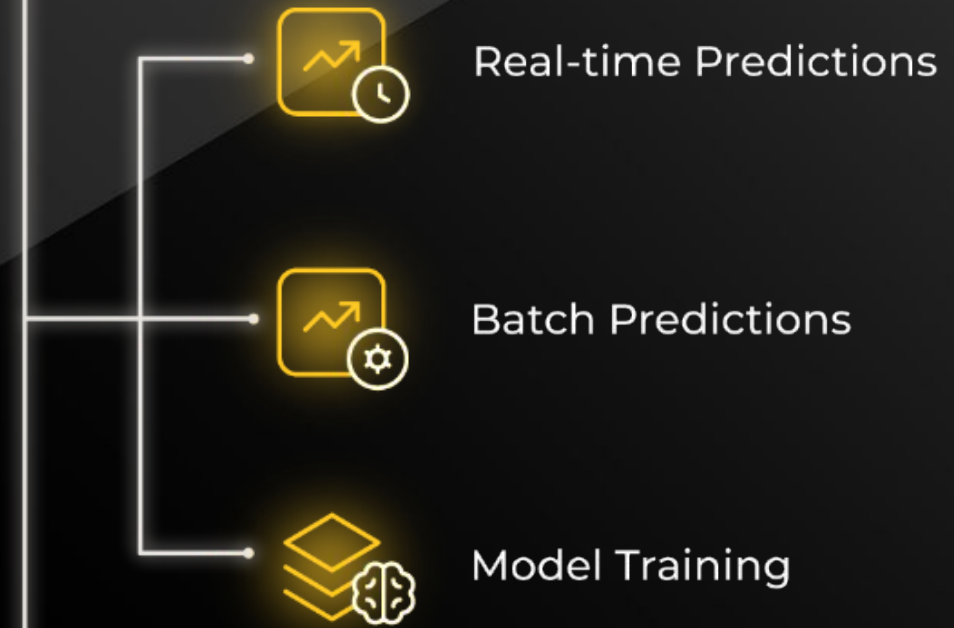
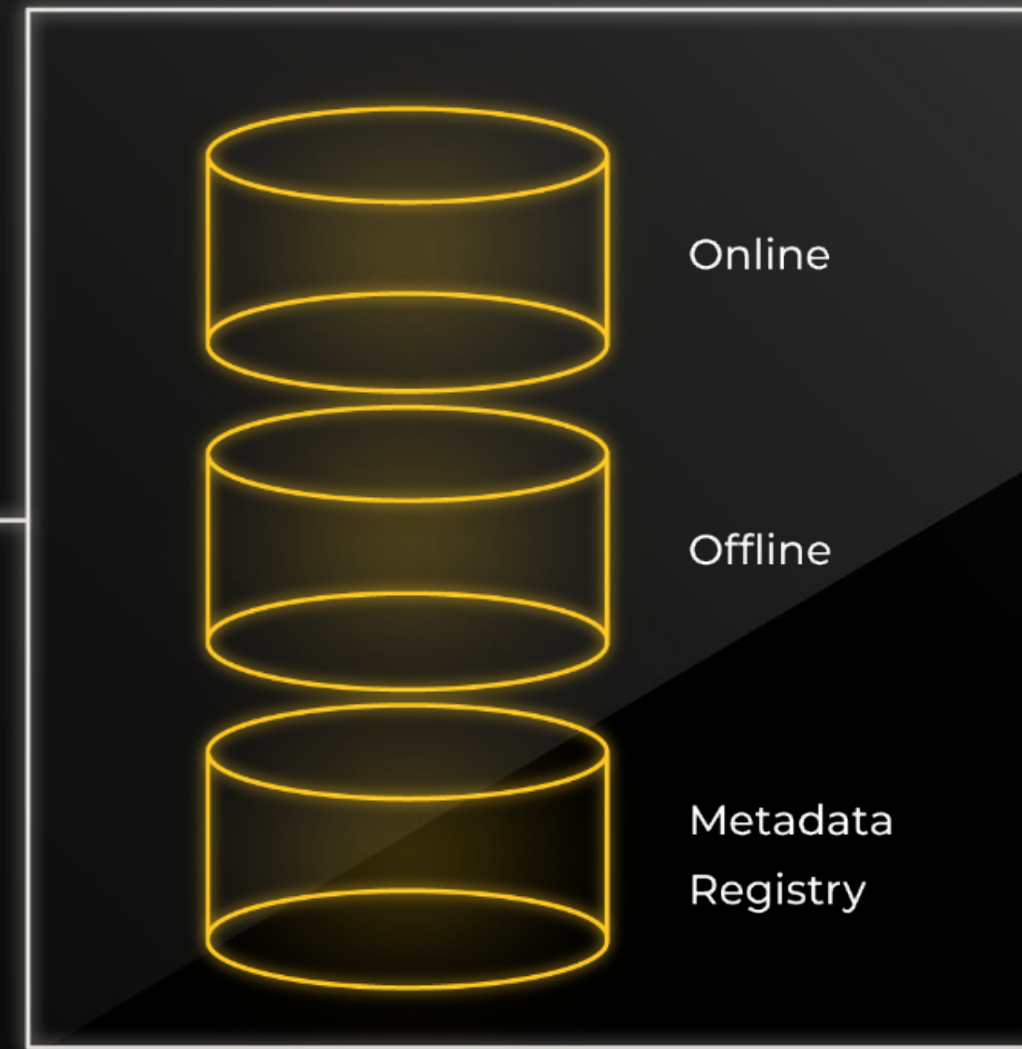
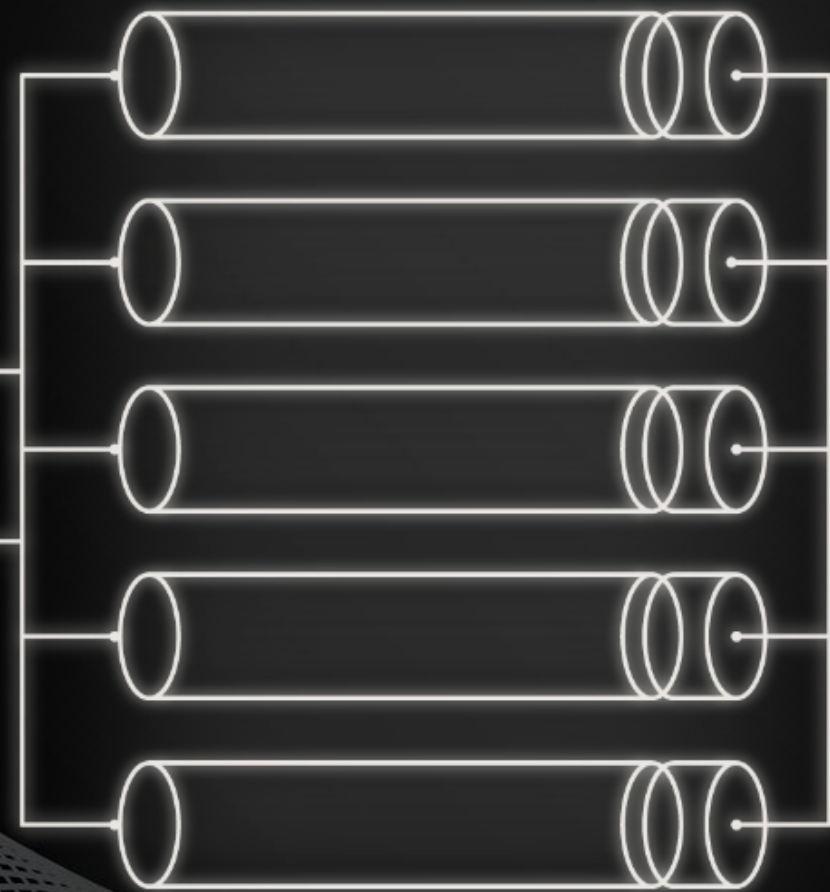


Raw Data

Feature Engineering

Feature Store

Feature Consumption



1

2

3

4



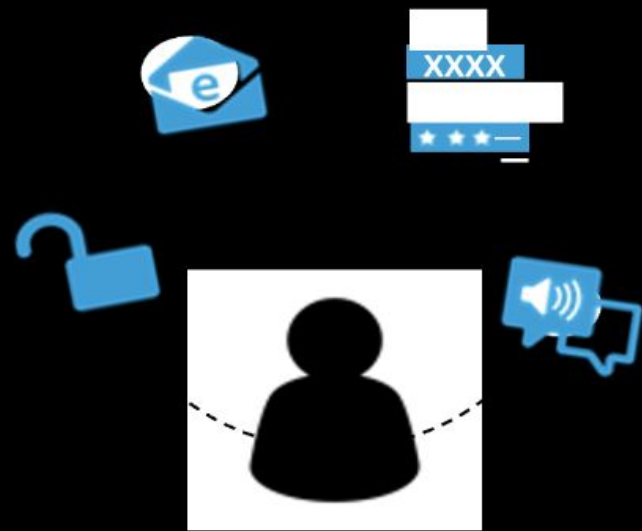
02 | Operationalizing AI at Scale with H2O Feature Store

- **40K Features**
- **~200 Models onboarded**
- **>250 Professional Data Scientists and >200 Citizen Data Scientists**
- **Supports 2 Real time model serving platforms that deal with multimillion transactions with millisecond performance expectations**
- **Feature store is part of Model engineering and Model Deployment architecture**

AT&T Use Case - Fraud



Mobility Fraud: Organized Crime Stealing "iPhones"



BILLION DOLLAR
Mobility Fraud
Industry affecting all
US Carriers

Gaming Fraud:
"Gaming Customer"
has no intention to pay
and uses their "credit" to sell
new iPhone (and other
devices) to fraud crime
ring

Identity Theft:
Identities stolen via
social engineering
or otherwise and
used to obtain
handset to resell
overseas

Illegal Unlocks:
Bribing or
impersonating Call
center employees
to unlock phones
that are under
contract

Feature Store helping in Realtime AI/ML Pipelines



Ingest



H2O
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In-Store

Online

Via Phone

Login

Add to Cart

Checkout & Payment

Shipment

Real Time AI/ML

H2O
DRIVERLESSAI



Apply Rules +
AI/ML Models

Retail Fraud
Equipment Gaming
Upgrade
Digital
National Retail
Business Fraud
Quick Permutation

Serving Remediations



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AT&T Use Case – Example use case: Churn

By leveraging the feature store we found relevant features and improve model by 11% in 2 hours

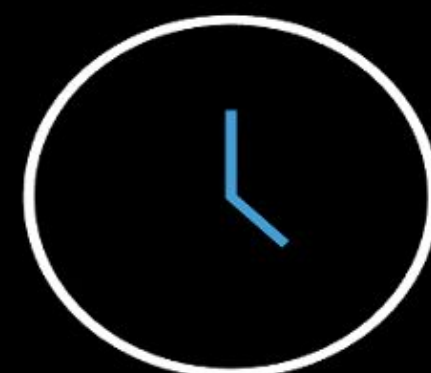
Before Feature Store

66%

Go Shopping!



Add Account Activity Features



After Feature Store

77%

2 hours in Feature Store yielded an 11% increase!



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03

Feature Store GEN AI Demo



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Thank you

Contact

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