

# Introduction to Driverless AI

# H2O Products



In-Memory, Distributed  
Machine Learning Algorithms  
with H2O Flow GUI



H2O AI Open Source Engine  
Integration with Spark



Lightning Fast machine learning  
on GPUs



# Steam

Secure multi-tenant H2O clusters

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Automatic feature engineering,  
machine learning and  
interpretability

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DRIVERLESSAI

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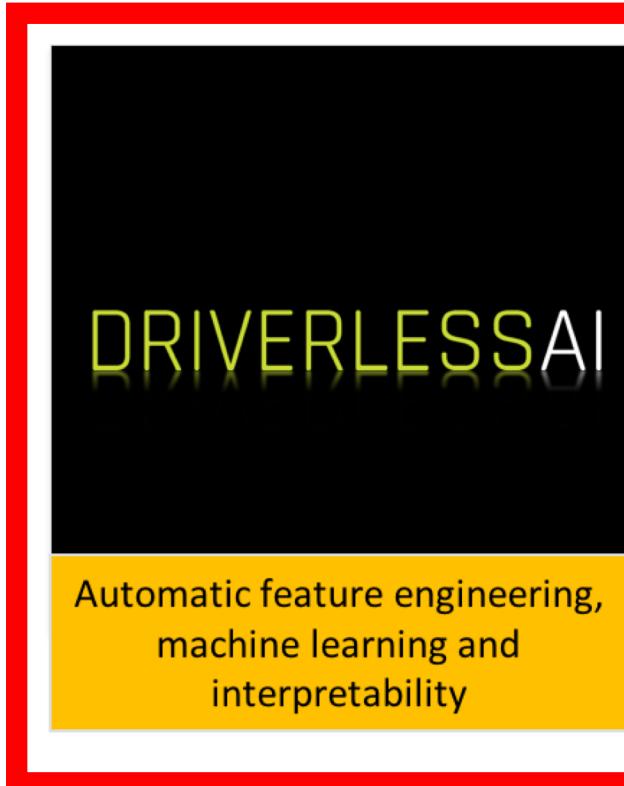
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Runs on Power 8 / 9

# H2O Products



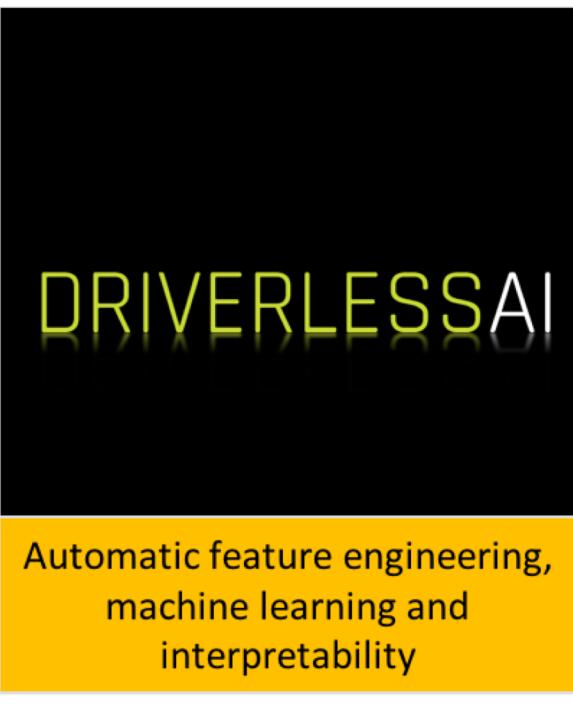
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The logo for Steam, featuring the word "Steam" in a large, orange, serif font on a black background with a red border.

Secure multi-tenant H2O clusters

# Typical Use Cases

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- Churn
- Loan Defaults
- Fraud Detection
- Forecasting (Time Series)
- Sentiment Analysis (NLP)

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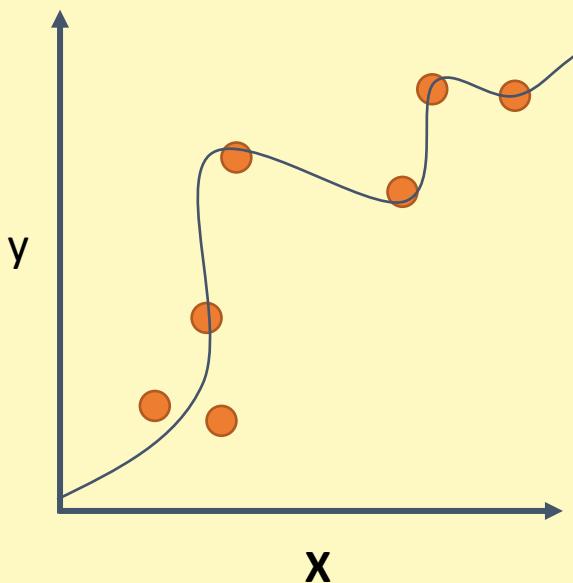
- Churn
- Loan Defaults
- Fraud Detection
- Forecasting (Time Series)
- Sentiment Analysis (NLP)

Plus many many more!

# Supervised Learning

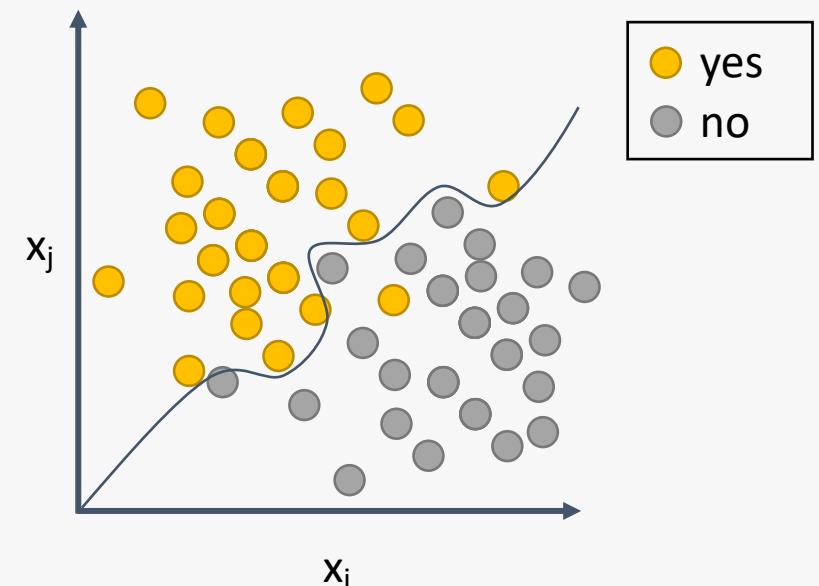
## Regression:

How much will a customer spend?

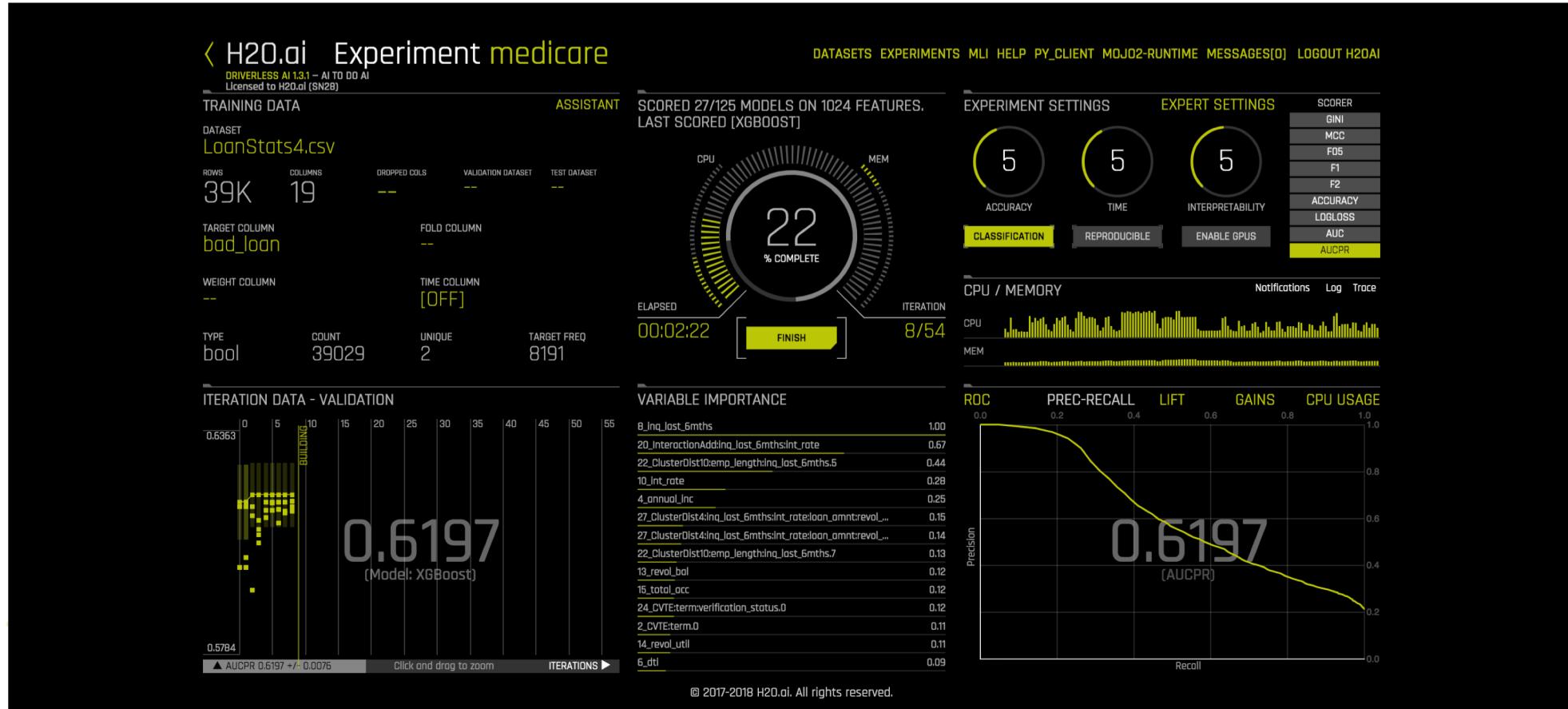


## Classification:

Will a customer churn?

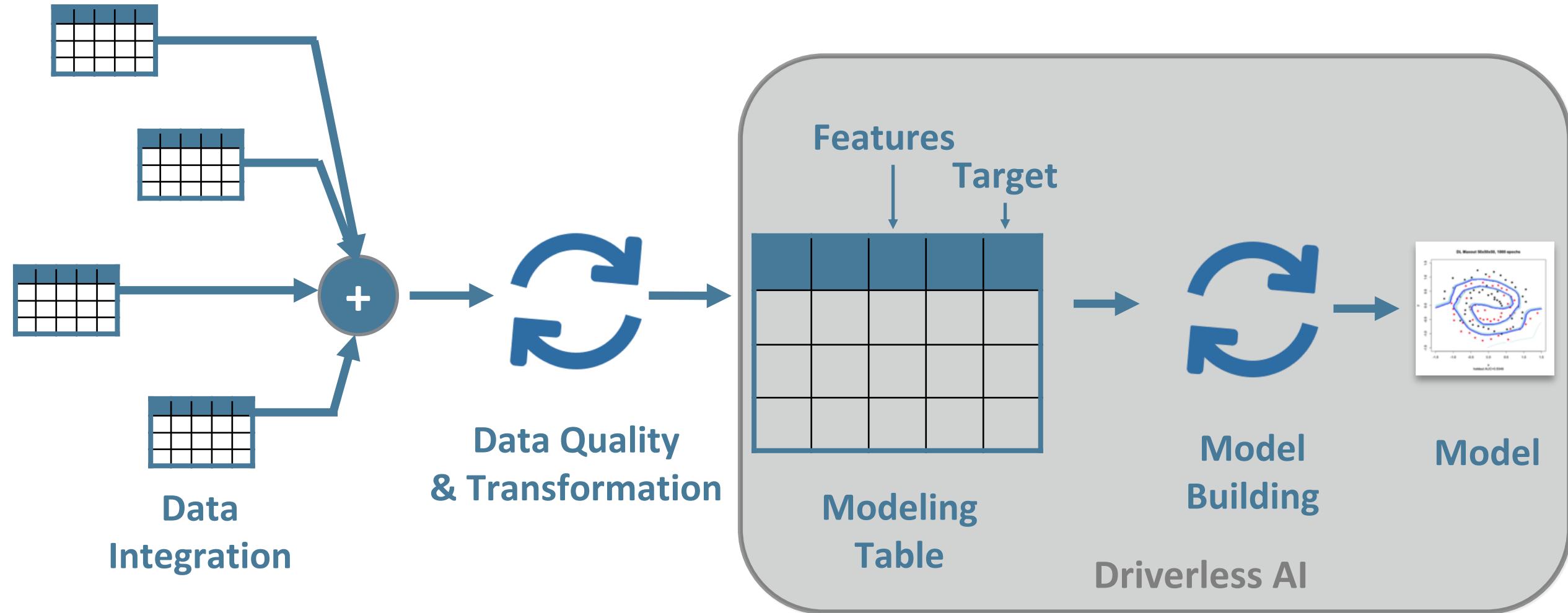


# Where does Driverless AI fit in?

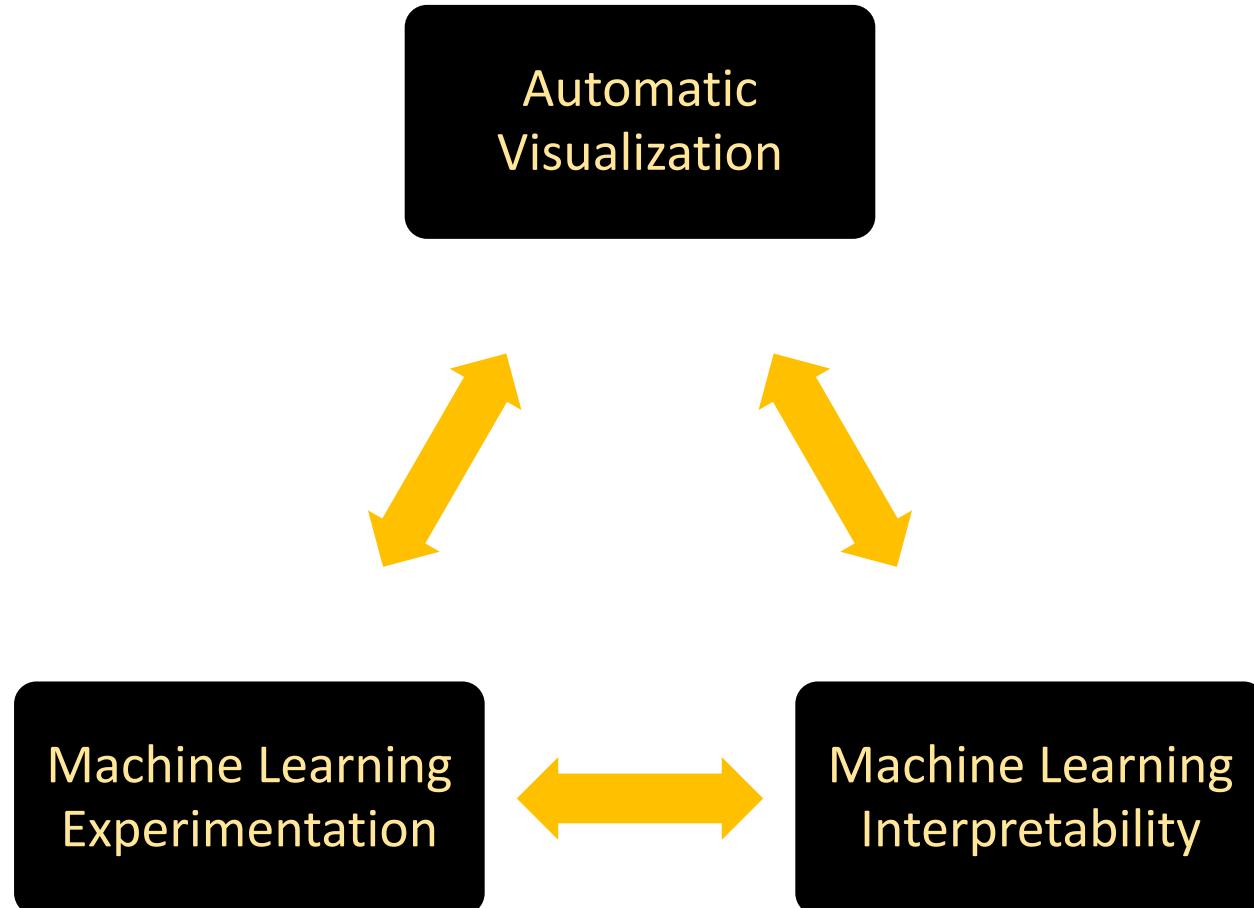


H<sub>2</sub>O.ai

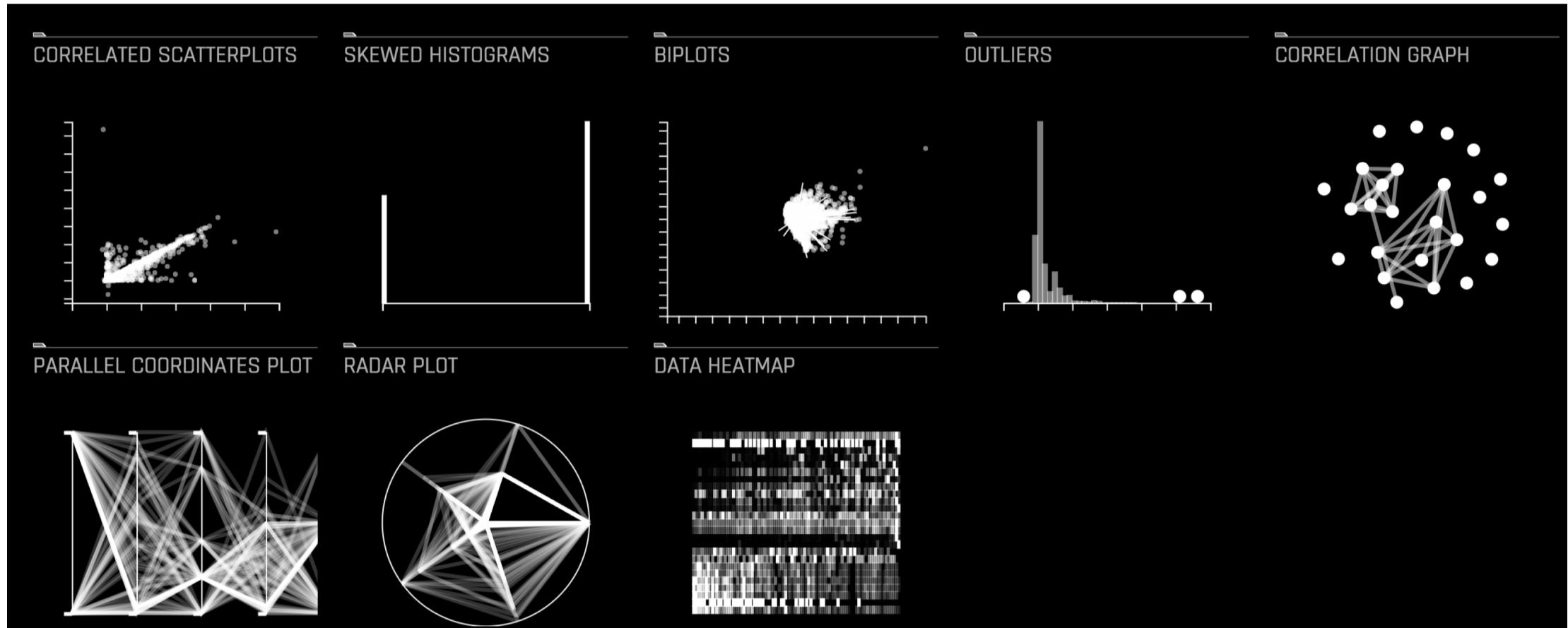
# Typical Enterprise Machine Learning Workflow



# Driverless AI Components



# Automatic Visualizations



# Driverless AI – ML Experimentation



**Accuracy**



**Time**

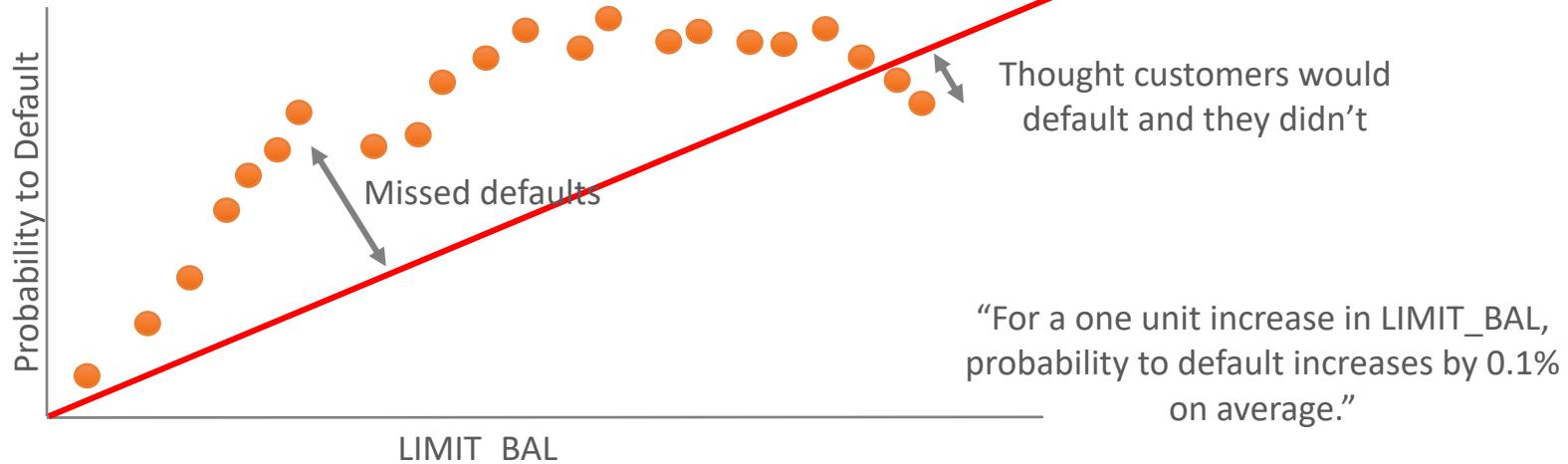


**Interpretability**

# Driverless AI – ML Interpretability

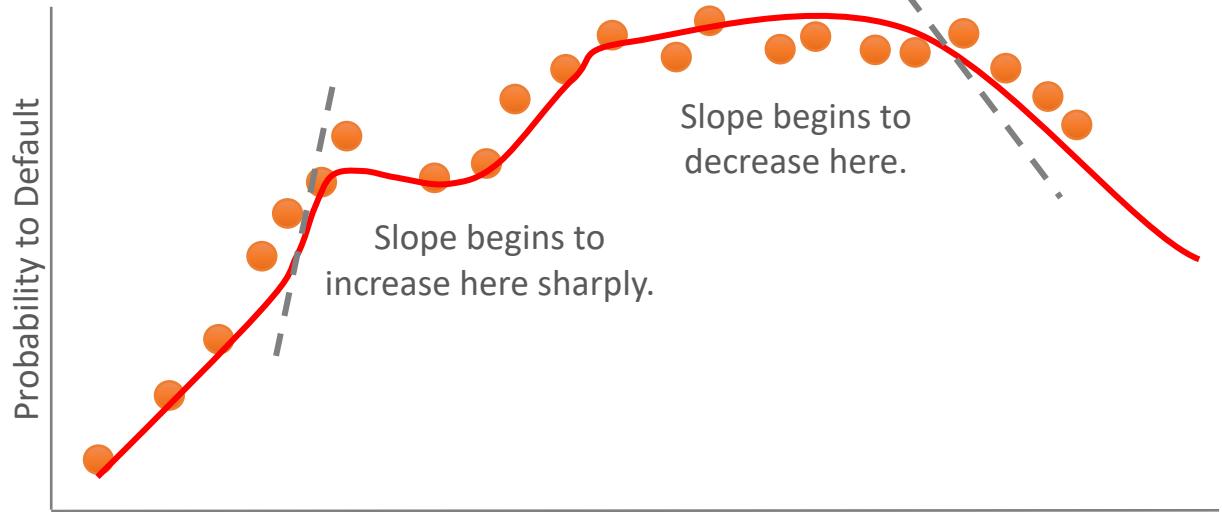
Linear Models

*Exact explanations for approximate models.*



Machine Learning

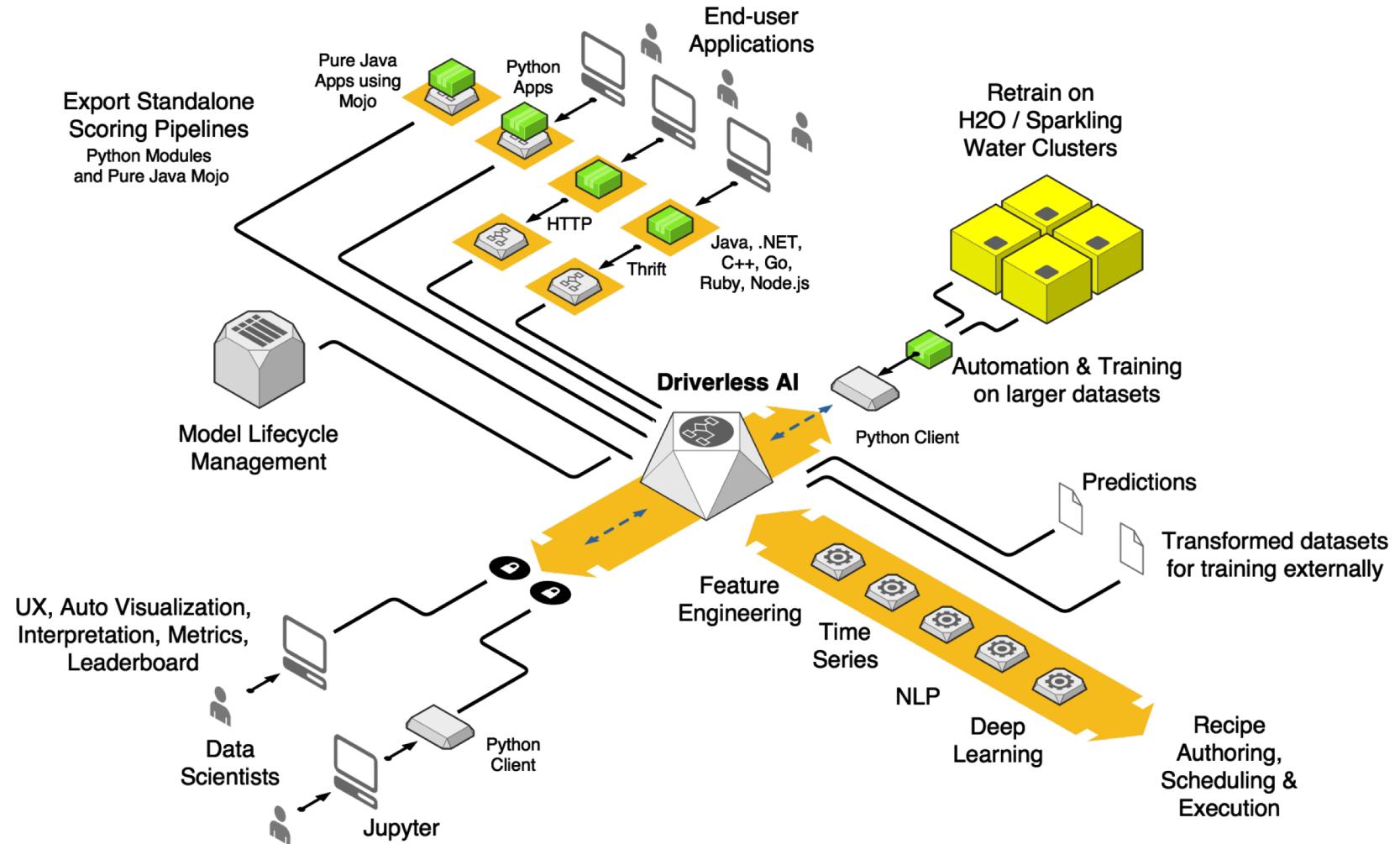
*Approximate explanations for exact models.*



# DEMO

# Driverless AI Architecture

# Driverless Architecture



# Driverless AI Roadmap

# Driverless Roadmap

## Driverless AI Roadmap

Feature	v1.0	v1.1	v1.2	v1.3 (NOW)	v1.4
Kaggle <b>Grandmaster Recipes</b> for i.i.d. data					
<b>Automatic Visualization</b>					
<b>Machine Learning Interpretability</b>					
<b>GBM</b> (XGBoost) for high accuracy incl. stacked ensembles (CPU/GPU)					
5-minute Install with <b>Docker</b> for Linux/Mac/Windows - <b>Cloud/OnPrem</b>					
<b>Standalone Python Scoring Pipeline</b>					
Hardware acceleration: <b>NVIDIA GPUs (DGX-1 etc.)</b>					
User Management and Security (LDAP/Kerberos)					
Data Connectors: NFS/HDFS/S3/GCS/BigQuery, CSV/Excel/Parquet/Feather					
<b>GLM</b> (Linear models) for high interpretability (CPU/GPU)					
Native Installer: <b>RPM/DEB</b>					
<b>Cloud Neutral:</b> Amazon/Microsoft/Google					
Kaggle Grandmaster Recipes for <b>Time-Series</b>					
<b>IBM Power8/Power9</b>					
Deep Learning <b>TensorFlow</b> Models (CPU/GPU)					
<b>Standalone Java Scoring Pipeline (MOJO)</b>					
Deep Learning for <b>NLP</b> (Text)					
<b>LightGBM</b> Models (CPU/GPU)					



# Questions?

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