# Automated Feature Discovery to Power Your Feature Store

Feature Store Summit

Oct 11, 2022



### Features and Feature Store

**Feature Discovery** 



Features need to be drilled and extracted from raw data

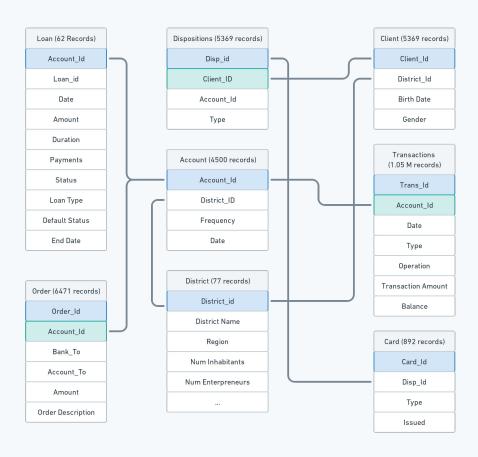
**Feature Store** 



Feature is the fuel for ML



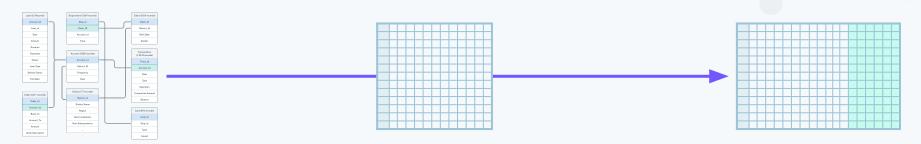
## Feature Discovery / Feature Engineering



- Czech Bank loan data
- Predict client loan defaults
- 8 tables, different cardinalities
- Timestamped-transactions



## Feature Discovery / Feature Engineering



# Transform multiple tables into a flat feature table

#### Data Quality and Cleansing

- Data Schema Matching
- String Value Canonicalization
- Missing Values & Outliers
- Data Skewness

#### Multi-table Transformation

- Normalize / Denormalize
- Auto-Join / Aggregation
- Temporal relationship
- Table combinations

# Transform multiple columns to higher-order features

#### Value Transformation

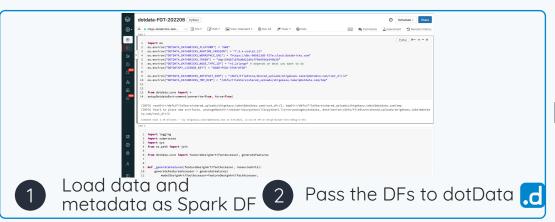
- Categorical Encoding
- Numeric Binarization
- Timestamp Featurization

#### <u>Higher-Order / Combinatorial Features</u>

- Neural Encoding (e.g. Auto-encoder)
- Wavelet Transformation



### Implementation Example: dotData FF on Databricks







Register features into Feature Store / Delta Live Table







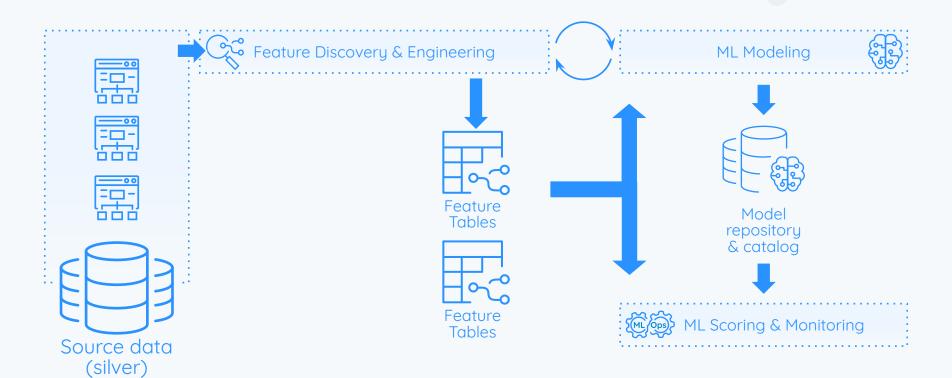
Prepare Silver data and metadata



Run Feature Factory on Databricks

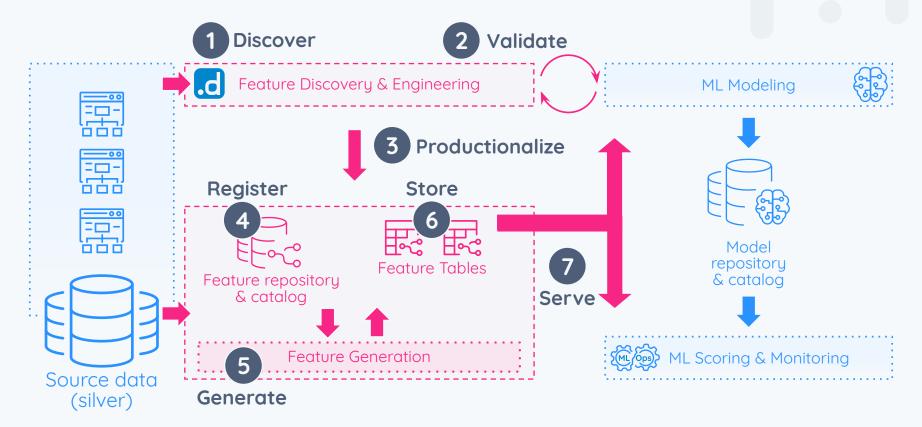


## Conventional AI/ML Development





### Feature Discovery with Feature Store





2015

Automated Feature Engineering 2018

CA

HO established in San Mateo,

2019

Closed Series A (Investment to date \$43M)

2020

AWS Competency, ISV Accelerate & MS Azure partnerships

Closed Series B (Investment to date \$74.6M)

## Award-winning feature discovery platform











































"dotData's exceptional feature engineering capabilities make it especially suitable for the most challenging use cases." Forrester









dotData Feature Discovery



Feature Factory + Store is A New Paradigm

# Thank you!

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