



Elitmind Feature Store for Al and Machine Learning



**Gold Data Analytics** Gold Data Platform Gold Application Integration Gold Application Development Gold Project and Portfolio Management

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Advanced Specialization Analytics on Microsoft Azure

Advanced Specialization Al and Machine Learning on Microsoft Azure





Most mature Enterprise organizations introduce Advanced Analytics capabilities as one of their main assets. **Machine Learning and Al Solutions** are no longer in the experimentation phase, but already play a significant role in **data-driven decision-making**.



## Make a change with Elitmind Feature Store for Al and Machine Learning!

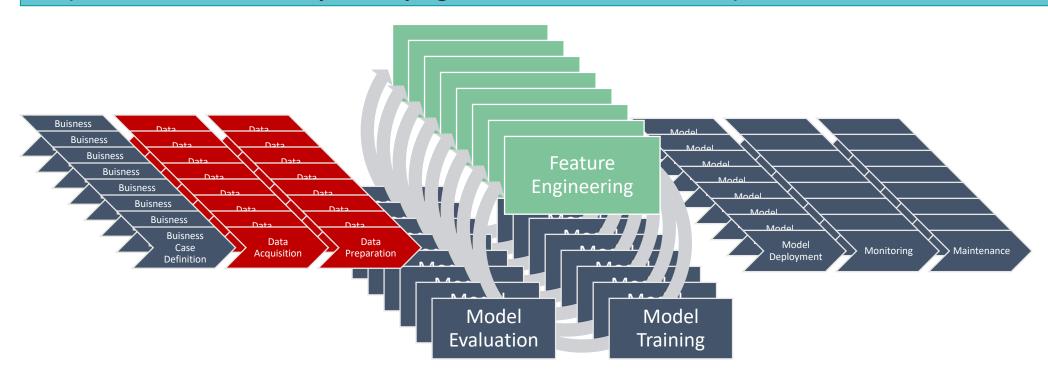
It is commonly said that **80% of a data scientist's time goes into data wrangling**, including tasks like sourcing of data, ingestion of data, cleaning it, and featurizing the data.

A well-defined **Feature Store** makes features available in a **single place** that **reduces time**. It also **promotes team collaboration**, reuse, and leads to faster model experimentation and inference outcome.

## Data Science at Scale



Optimize Time To Value by identifying bottlenecks and common patterns in Data Science Processes.



Data Wrangling is the biggest bottle neck in the process of every Data Science Project. While Data Acquisition & Preparation is a well-known process, **optimizing Feature Engineerin**g to ensure reusability is a new challenge that emerges as Number of Machine Learning Projects grows inside organizations.

# Let's see what you can achieve thanks to **Elitmind Feature Store for Al and Machine Learning**



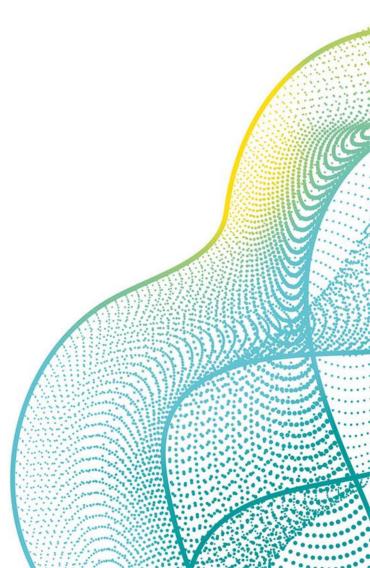
Optimize time-to-value metric of all Data Science initiatives.

Deliver ML projects at faster than ever pace.

Implement state-of-theart Datalake concept.

Build ML Ops best practices to enable Data Science at scale.

Leverage Azure Synapse Analytics and Azure DataBricks functionalities.



## We have the **solution**:

Feature store is a cloud-based solution for managing Machine Learning features, including the feature engineering code and the feature data.

### All in one place

Feature Store is a central vault for storing documented, curated, and access-controlled features that can be used in many different ML models across the company.

#### Serve data

A feature store registers available features and makes them ready to be discovered and consumed by ML training pipelines and inference services. Retrieve feature data with low latency and use for online prediction.

#### Connect

Connect data from various sources like data warehouse or data lake. Ingest your data by executing defined transformations, aggregation, validation, and other operations to transtransform your data into features in **Feature Store**.

#### Time travel

Use your features to train models with data from any point in time. **Feature Store** supports timetravel queries, by storing all updates enabling queries on old values for features.





## Choose Elitmind Feature Store for AI and Machine Learning





**Track and share features** between data scientists including a **version-control repository.** Process and curate feature values while preventing data leakage.



Work as built-in solution in **Databricks**, providing well-known APIs for data engineers, data scientists and data analysts in Scala, R, Python and SQL. **Enable cluster computing** using Apache Spark environment.



- ✓ Offline feature store for serving large batches of features to create train/test datasets and use the features for training jobs.
- ✓ **Online feature store** for serving a single row of features for an online model in scoring task. Typically, it is served at a latency of seconds or milliseconds.



**Accelerate Machine Learning innovations** by reducing the data engineering process from months to days and encouraging feature reuse.



## Use benefits of Delta Lake



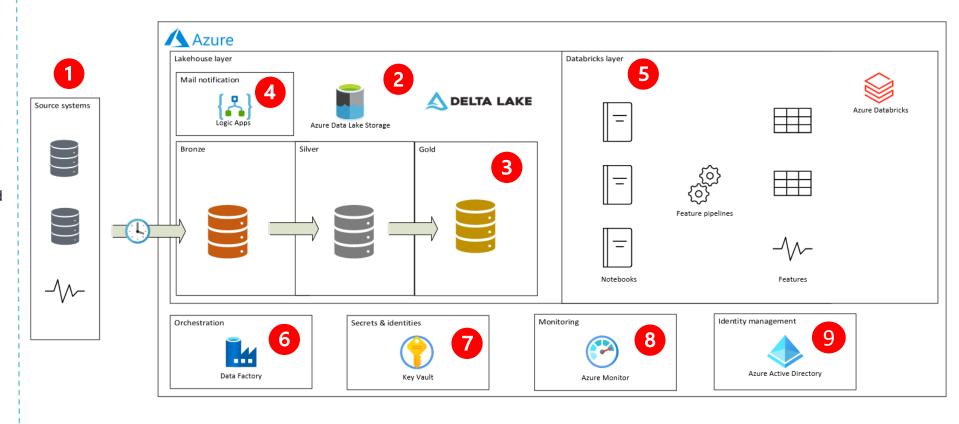
Feature Store keeps your data in Delta format which enables to:

- ✓ Use point-in-time correct views of the state of your data by performing time-travel queries thanks to extended logging.
- ✓ Use full potential of cluster computing by performing well in Apache Spark environment.
- Integrate with multiple services and tools inside Azure cloud like Synapse SQL Serverless, Azure Data Factory or Databricks which support Delta Lake.
- ✓ Store data in highly compressed and optimized Parquet files.

# Our approach

- Load data from different source systems including external databases.
- Use Delta format to keep your data in Lakehouse
- 3 Store features in gold layer of Delta Lake
- Set mail notofication in Logic app to be informed about events
- Use Azure Databricks as analytical platform for Data Analytics and Advanced analytics.
- Orchetrate data flows in Azure Data Factory
- Secure keys and cerificates in one safe place.
- 8 Track application performance in Azure Monitor
- 9 Manage identity and accesses in Azure Active Directory







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