What is Unified Data Analytics?

Organizations that adopt a UDA approach put infrastructure in place that combines their data engineering, data science, and business intelligence workflows under one umbrella. In other words, they implement one system that allows everyone on their data science teams to work together on data through its entire lifecycle.

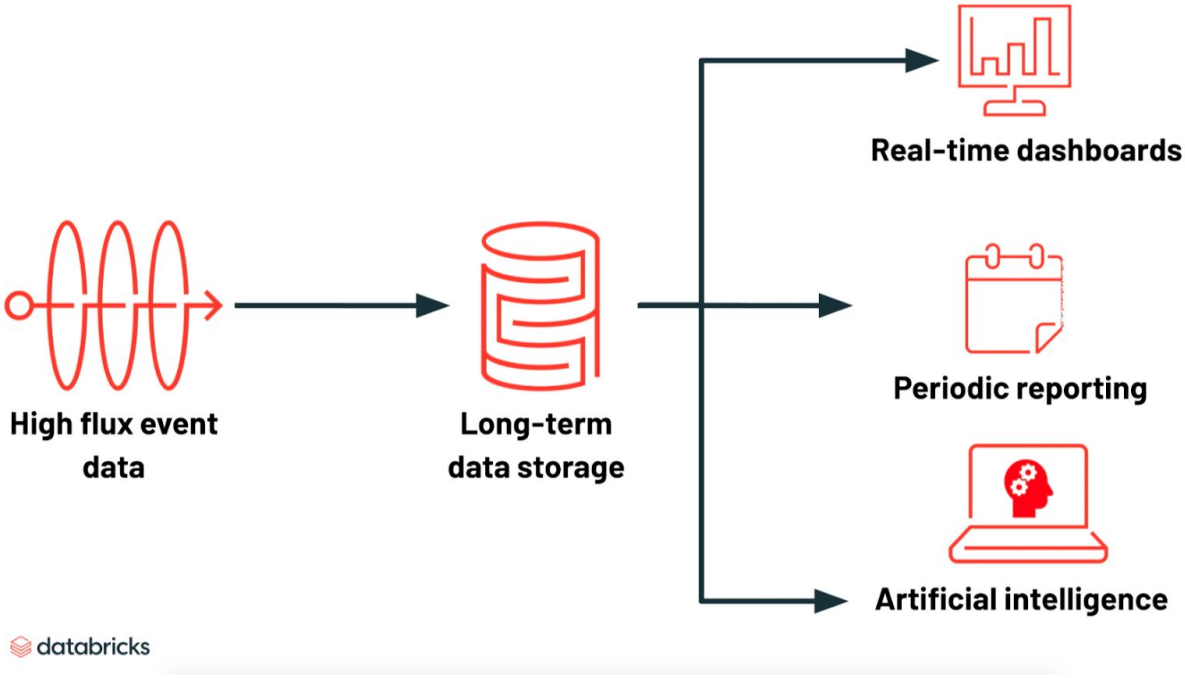

Fig 1.1 A conceptual image of a UDA approach.

Step 1: Ingesting high-flux event data
High-flux event data is another term for big data (data coming in massive volumes, very quickly and in many different formats). With a UDA approach, organizations have a system in place that can easily collect and process both batch and stream data simultaneously. This is a significant improvement that UDA brings to big data infrastructures - it allows teams to join what has been traditionally two separate processes, into one.

Step 2: Storing data long-term
The next step in a UDA approach is unification and long-term storage of all of an organization's data.

Unification of data simply means that all of an organization's data is brought into one data store that serves as the organization's single source of truth. Data is stored together, regardless of type (batch vs, streaming, structured vs. unstructured). Data is also brought from the siloed places it exists into this single source of truth. This single source of truth

then serves as the one data source that all data practitioners work from. So for example, you might have customer transactions coming in, and also have data stored in one server or in a local computer -- the idea behind UDA is that all of that data is brought together into a single source of truth.

Long-term storage of data means that an organization can keep all of its data over time. So you might ask yourself- why would we want to keep all of our data over time? This means that organizations do not have to have a "plan" for their data as they collect it -- they can wait until they need their data to start working with it. In the meantime, it simply sits in their data store until you decide that it's useful for analyses or planning purposes. Long-term storage as a single source of truth is also important when it comes to complying with regulations like GDPR. Having all of your data in one place makes it easier to manage deletion requests from customers, for example.

Step 3: Working with data

The last elements in a UDA approach are the products created from extracting insights from data. Streaming data can be converted into real-time dashboards, batch data can be used for periodic reporting purposes and both streaming and batch data can be analyzed using advanced analytic techniques like machine learning.