

A unique solution for Data Integrity & Data Relevance

Digital Cognate changes the way you store trusted Value and generate trusted Outcomes. Digital Cognate also delivers a unique amalgam of Data Integrity and Data Relevance.

Value drivers are loud and clear

Mission-critical processes, high-value transactions, and the reporting of risk, governance, and compliance can be heavily impaired by data quality. Digital Cognates provide custodianship of your data in two vital vectors:

- **Data Integrity** refers to the **consistency** of any data throughout its life cycle based upon a quantitative **absolute measurement** that does not allow variation.
- **Data Relevance** refers to the **consistency** of any data to have a consequential impact on outcomes, also based upon a quantitative, **but not absolute**, measurement.

Providing authentication and audit of these two highly-valued elements of Data Quality requires two distinct approaches:

- **Data Integrity** is achieved and validated using **deterministic computational tools**.
- **Data Relevance** is achieved and supported using **probabilistic computational tools**.

Digital Cognates have two logical manifestations and applications, each a powerful and necessary element in any Transaction or Outcome:

- Inviolable **Data Packet (DP)** is defined by its user and captured in an immutable archive and used to protect mission-critical data that delivers trusted outcomes.
- Inviolable **Digital Asset (DA)** with intrinsic value and legal standing that represents transferable value.

DPs and DAs are created using the same rigour and processes in our growing Digital Cognate application stack:

- **Cognate Authenticity** (Data Integrity that establishes Value using deterministic tools)
- **Cognate Insight** (Data Relevance that establishes Value using probabilistic tools)
- **Cognate Accord** (legal agreement on the title and distribution of value)
- **Cognate Identity** (electronic identity of all parties in a transaction)
- **Cognate Token** (NFTs or registered securities with intrinsic value and legal standing).

Cognate Authenticity - Deterministic Data Integrity Solution

Data integrity refers to **the trustworthiness of data throughout its lifecycle** and is **the absence of unintended change**, which must be **authenticatable and auditable in real-time**. Our deterministic Data Integrity Solution provides three distinct layers that are the **most powerful, easily deployed, and scalable approaches to Data Integrity** in the market.

1. **Artefact-based UIDs** linking designated assets computationally to their designated, consensus-based data.
2. **Immutable archive** using hashing technologies to store both the UID and its associated metadata in a shared cognate record.
3. **Access logs** providing an anonymised audit of all data entries and access including failed attempts to alter data integrity.

This deterministic Data Integrity Solution ensures an audit trail and:

- **Non-erasure** of all data
- **Full version control** of all data
- **Identity and access control** to all data.

Data Integrity often boils down to management processes and can be a disjointed and highly-unautomated domain that does NOT deliver computational assurance of integrity.

Cognate Insight - Probabilistic Data Relevance Solution

There is less clarity around the definitions of *Data Validity*, *Data Reliability* and *Data Relevance*. Digital Cognate interprets Data Relevance as follows.

- Addresses the **quantitative ability of data to deliver a designated outcome**.
- Does **NOT address the consistency of the data** such as **correct formatting and storage**; nor does it mean that **data is complete and accurate**.

Digital Cognate's initial toolkit is under development and will include:

1. **Data visualisation**
2. **Density estimation**
3. **Data modelling for regressions** (i.e., estimating values with error bars to indicate if data is **falling outside of expected likelihood bounds, and to detect drift**).
4. **Data modelling for classifiers** (i.e., indicating unusual single events and delivering **conditional probabilities rather than decisions**).

The trustworthiness of your data and the mission-critical role it plays in your management and delivery of risk, governance and compliance outcomes to customers, shareholders and regulators warrants the **"immutability of computational confidence"!**

Digital Cognate puts the custodial integrity of your data first.

Our team will be sharing some white papers soon!

Phil Leone
CEO, Co-founder