



MAYAN ALFA

38. Data Integrity and Reproducibility

Data integrity and reproducibility were defined as foundational scientific pillars of MAYAN_ALFA Research.

Every dataset must be:

- immutable,
- hashed,
- audited,
- linked to release notes,
- and linked to a DOI snapshot.

The integrity layer includes:

- SHA256 verification,
- CSV validation,
- graph consistency checks,
- QA reports,
- and release scans.

Reproducibility means:

- the same workflow,
- the same release policy,
- the same benchmark context,
- and the same metadata discipline.

The project explicitly declares:

- a deterministic workflow,
- audit discipline,
- and a reproducibility-focused methodology.

Data integrity protects:

- DOI credibility,
- publication trust,
- and benchmark validity.

Without an integrity layer,
a benchmark project loses credibility.

For this reason, the integrity infrastructure was defined as one of the most important layers of the entire project.