

BIO-CODES – Enhancing AI-Readiness of Bioimaging Data with Content-Based Identifiers



The BIO-CODES project aims to enhance the AI-readiness of bioimaging data by integrating the International Standard Content Code (ISCC), a content-based identifier and global ISO standard. This open identification system ensures transparency, accessibility, and broad adoption across the scientific community.



Challenge

Existing methods for identifying and certifying bioimaging data lack the robustness required for generative AI models, which compromises the integrity, reliability and scientific reproducibility of the data. Closing these gaps is critical to preserving the value of bioimaging data and reducing bias in AI-driven analyses.

Solution

BIO-CODES will evaluate the ISCC standard (ISO 24138) and its applicability to bioimaging data in Life Science research. The primary objective is to assess its feasibility and develop a proof-of-concept, integrating ISCC into platforms like OMERO to enhance FAIR compliance.

Scientific Impact

BIO-CODES will improve transparency and collaboration in bioimaging research by implementing standardized content identifiers in existing workflows. This will facilitate data reuse, address ethical concerns in AI applications, and enhance the reliability of AI models in Life Sciences.

Partners

Leiden University, ISCC Foundation

<https://www.oscars-project.eu/projects/bio-codes-enhancing-ai-readiness-bioimaging-data-content-based-identifiers>