



St. Jude BioHackathon

Title

Database storage of image data with a unified API

Category

Data Management

Challenge

We need a standardized way of storing and accessing image data with a unified API. Storing images on the file system provides fast access at the cost of non-uniform data formats. Databases standardize data storage and access to pixel values for channels, time points, etc., but often at the price of much slower access speed. The solution should combine the benefits of both while avoiding the downsides.

Benefit

This would minimize the time spent on data preparation and formatting, aid programmatic access of datasets, and provide a basis for additional tooling that utilizes said API to dynamically pull and process specific data.

Helpful Tools, Packages, or Software

HDF5 format, REST APIs, Lightning memory-mapped databases (LMDB).