



Atomic Units of Knowledge in Research Objects
How FDOs Targeting Different Use Cases can Collaborate



DeSci Labs

Infrastructure LAYER

OPEN STATE

Distributed architecture

PORTABLE

Not bound to platform

FAIR

Machine actionable

PERSISTENT

Minimize social contracts

POWERFUL

PIDs as APIs

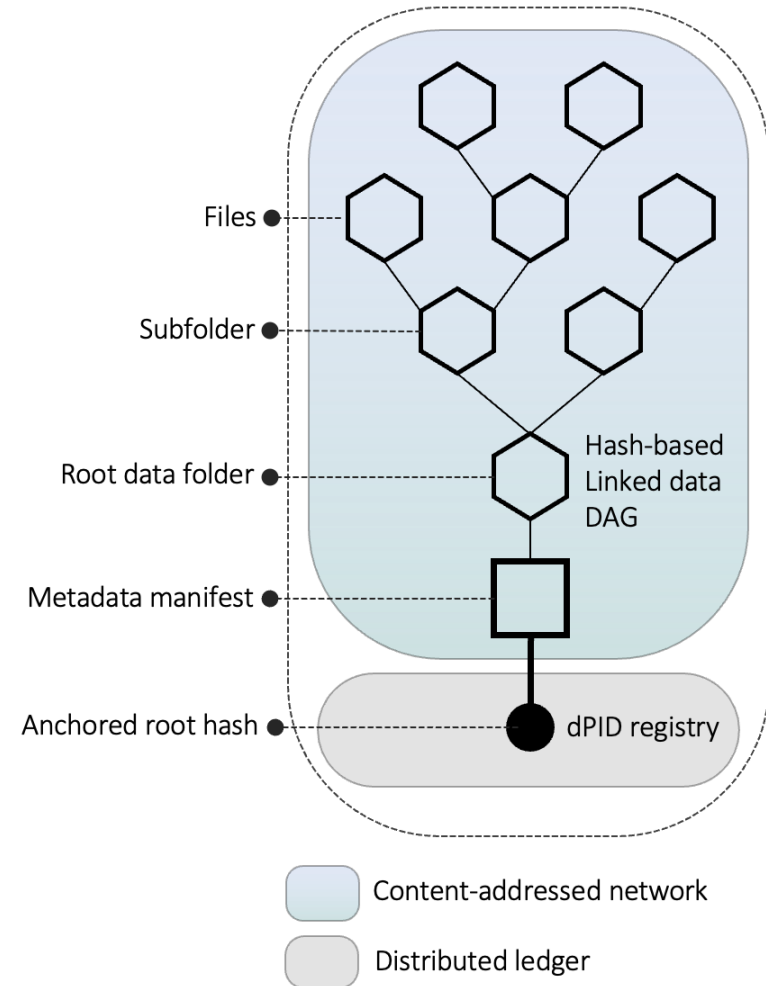
From Open State social graphs



To Open State research objects



Anchoring hash-based linked data
on a decentralized PID registry



Beyond Data Cataloging

MACHINE RESOLUTION
AI-actionable

IMPORT PAPER
Re-use easily

EDGE COMPUTE
Send programs to data

ATTESTATIONS
Address for attestation

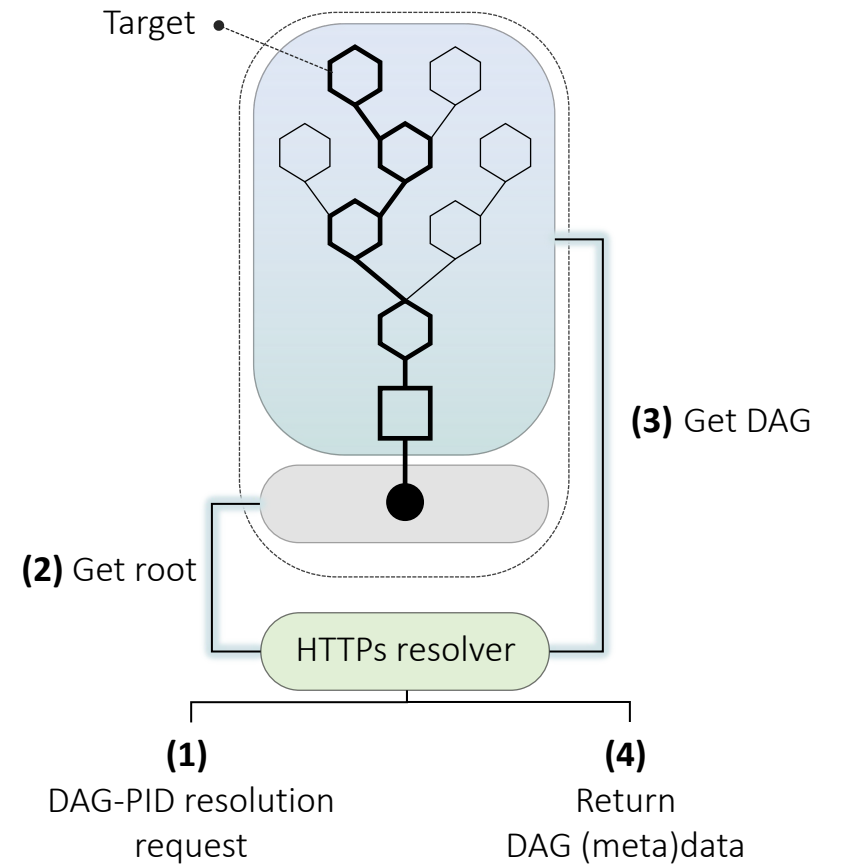
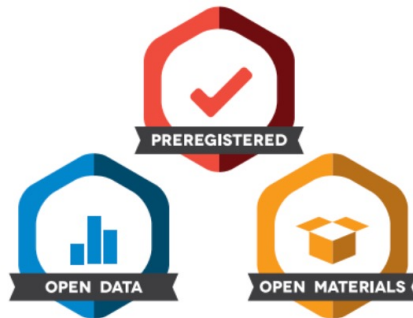


The AI community building the future.

Build, train and deploy state of the art models powered by the reference open source in machine learning.

Star 100,919

```
>>> from datasets import load_dataset
>>> dataset = load_dataset("lhoestq/demo1")
```



Open state read and write
(Irrevocable API)

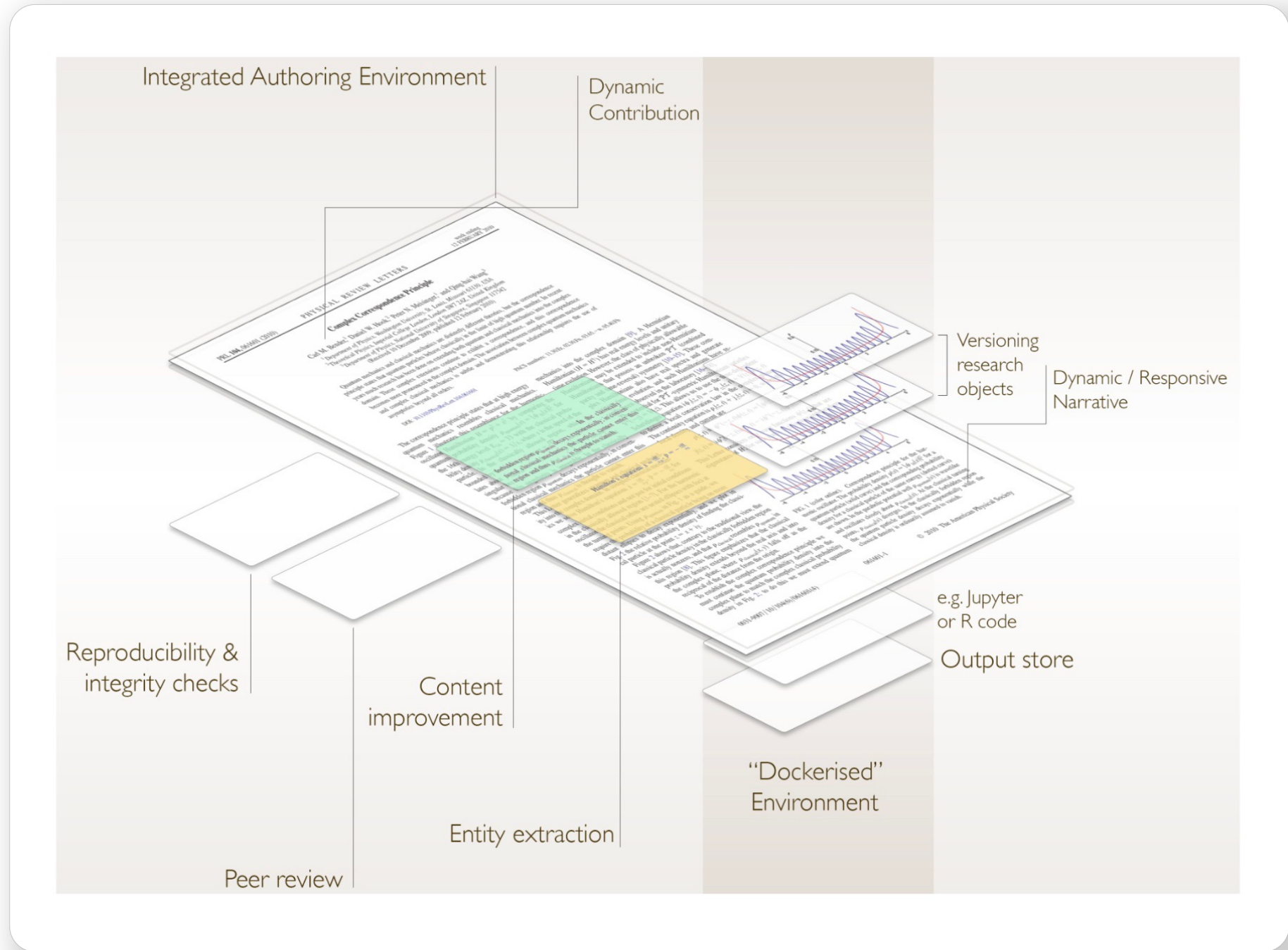
Application LAYER

COLLABORATIVE
Multiplayer

DYNAMIC
Versionable object

OPEN
Record of esteem

CREATIVE
Combine components



Nodes app

READER

Read/Annotate

CODE EXPLORER

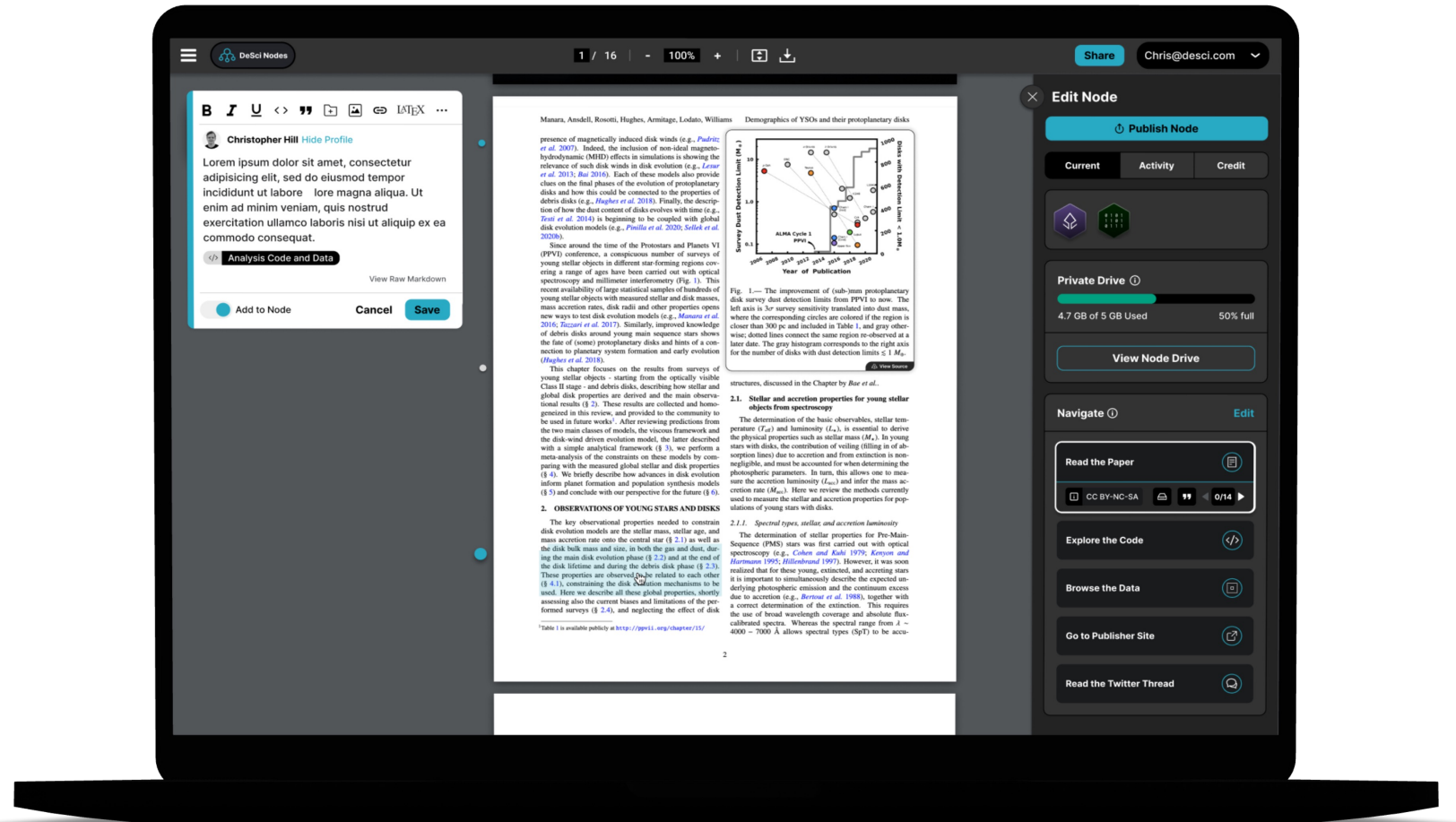
Explore code

DATA DRIVE

Explore data

EDITOR

Build Research Object



Nodes app

READER

Read/Annotate

CODE EXPLORER

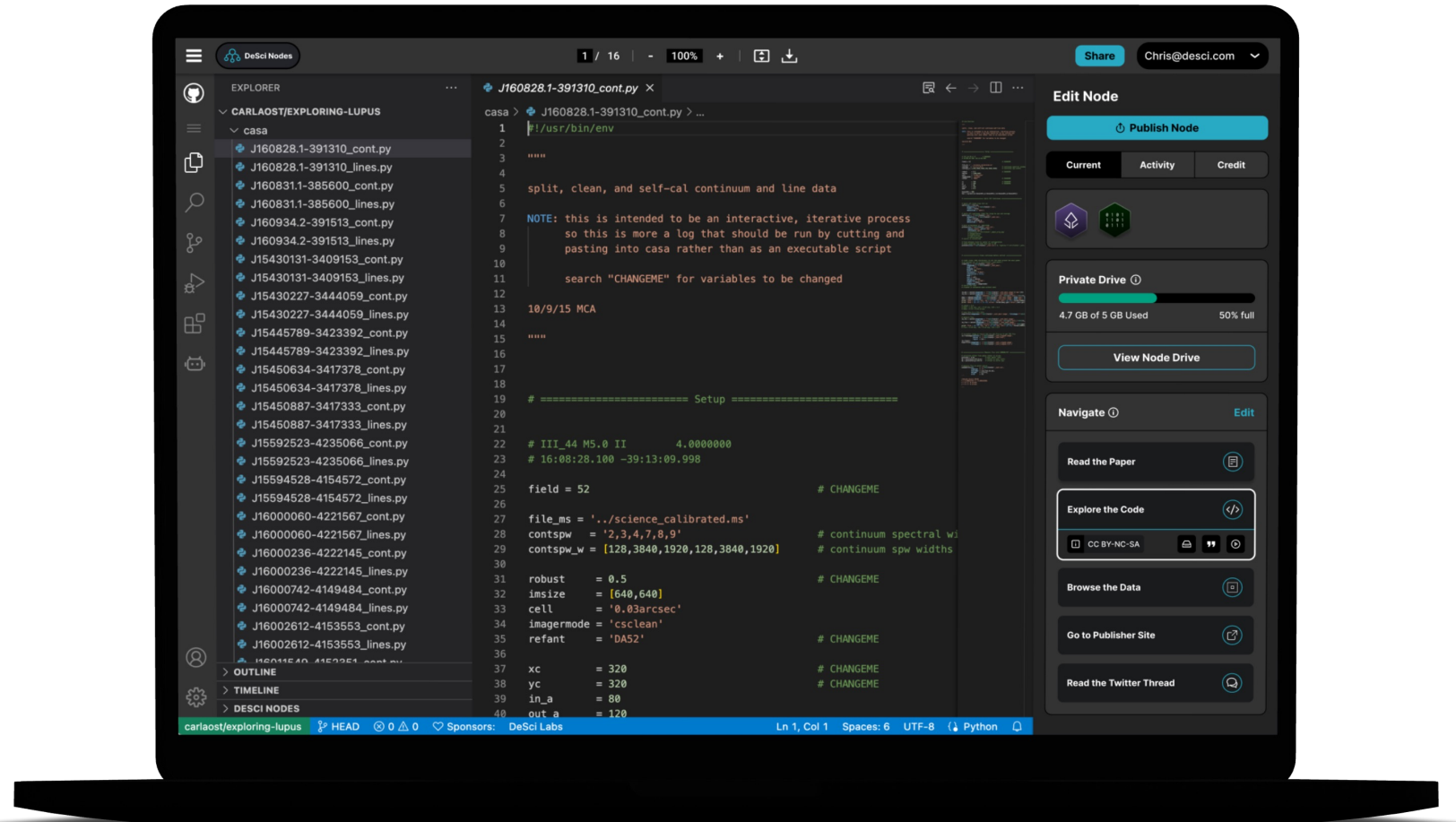
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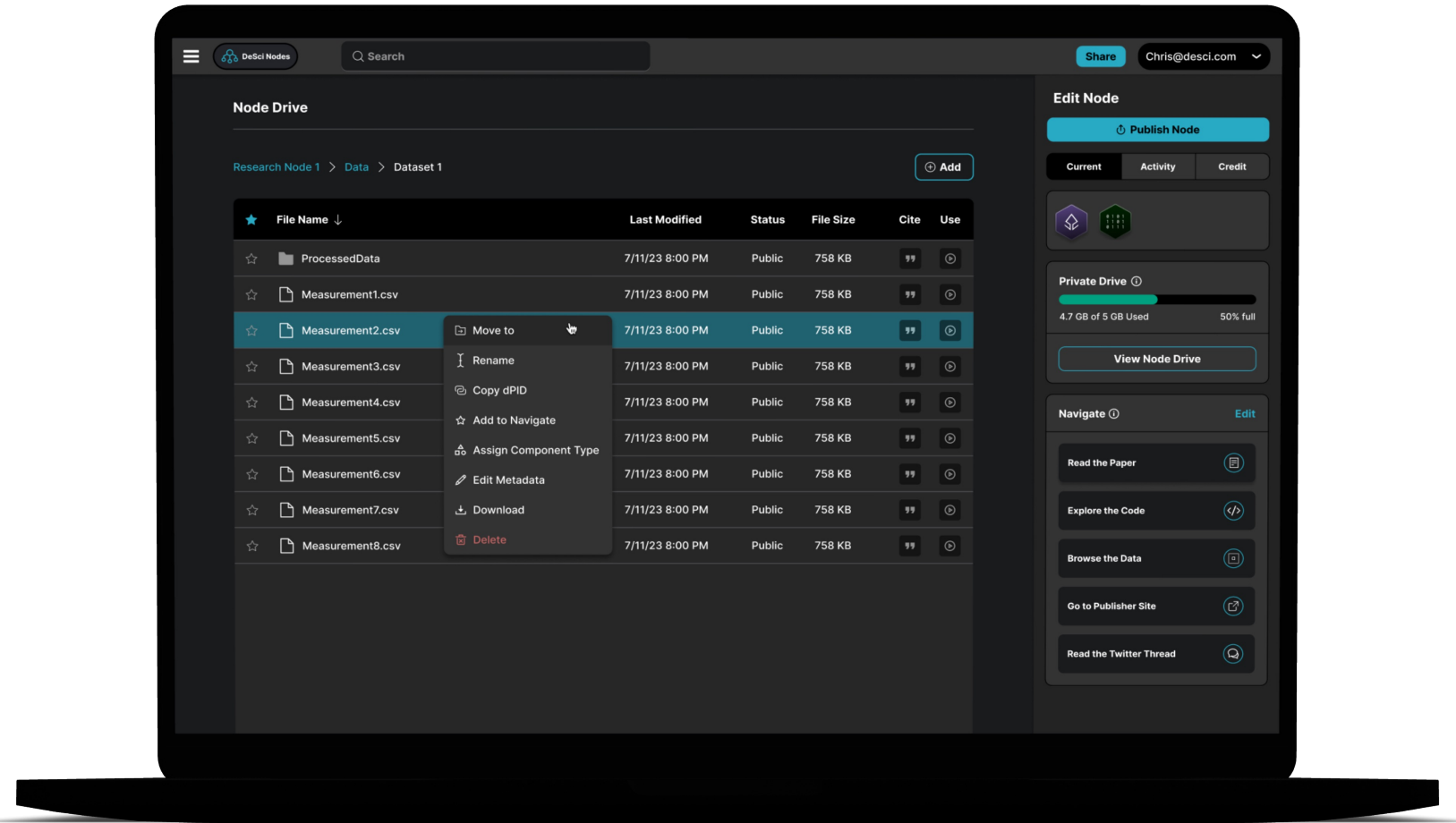
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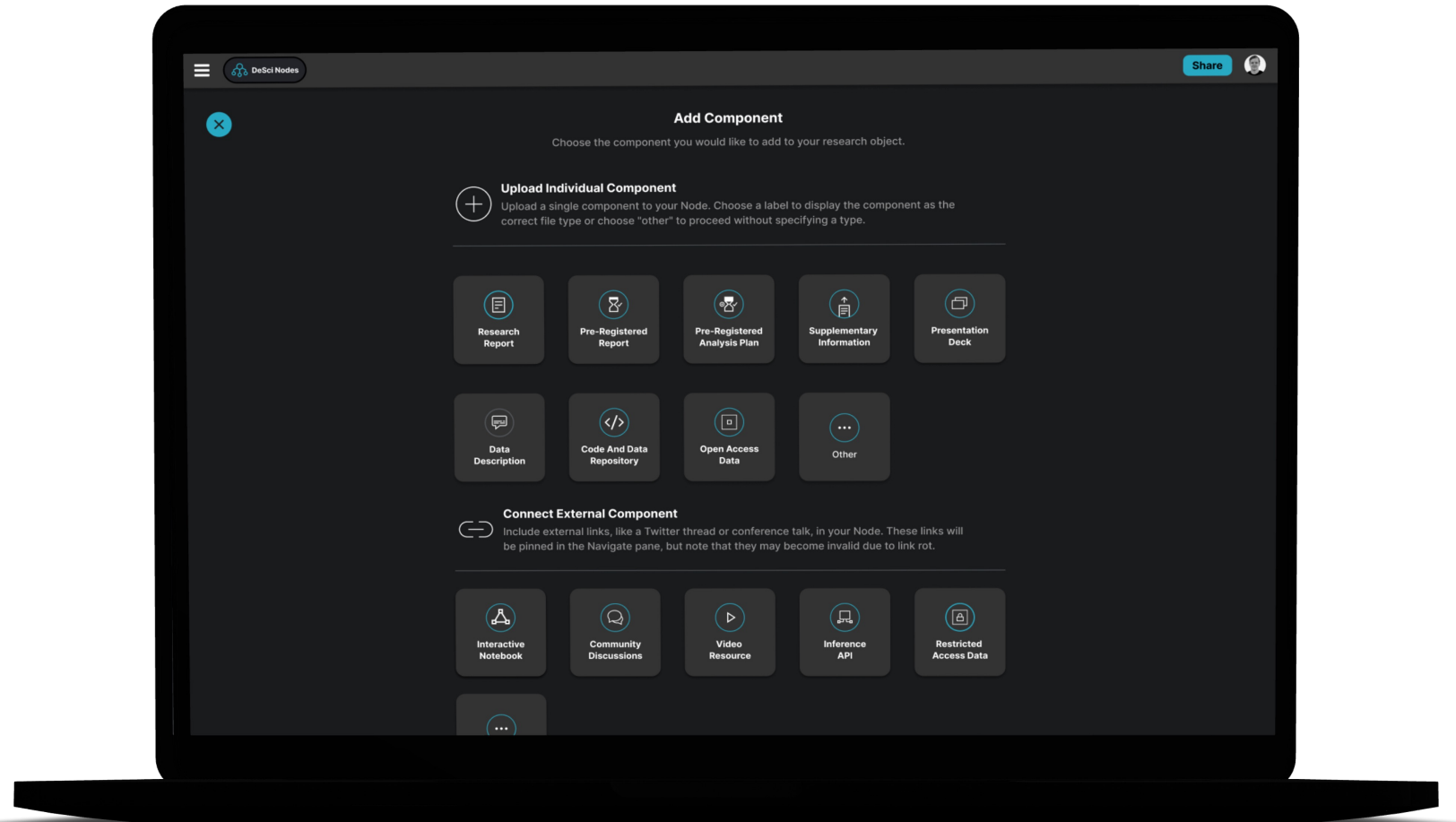
Explore code

DATA DRIVE

Explore data

EDITOR

Build Research Object



A hand is shown from the bottom, holding a glowing blue digital tree structure. The tree is composed of many thin, branching lines that form a dense, bushy shape. The background is a dark blue gradient with scattered white and blue particles, some of which are out of focus. A faint, white wireframe grid is visible in the background, particularly around the tree. The text "DEMO TIME!" is centered in the middle of the image.

DEMO TIME!