Developing a Zenodo Jupyter Lab Extension
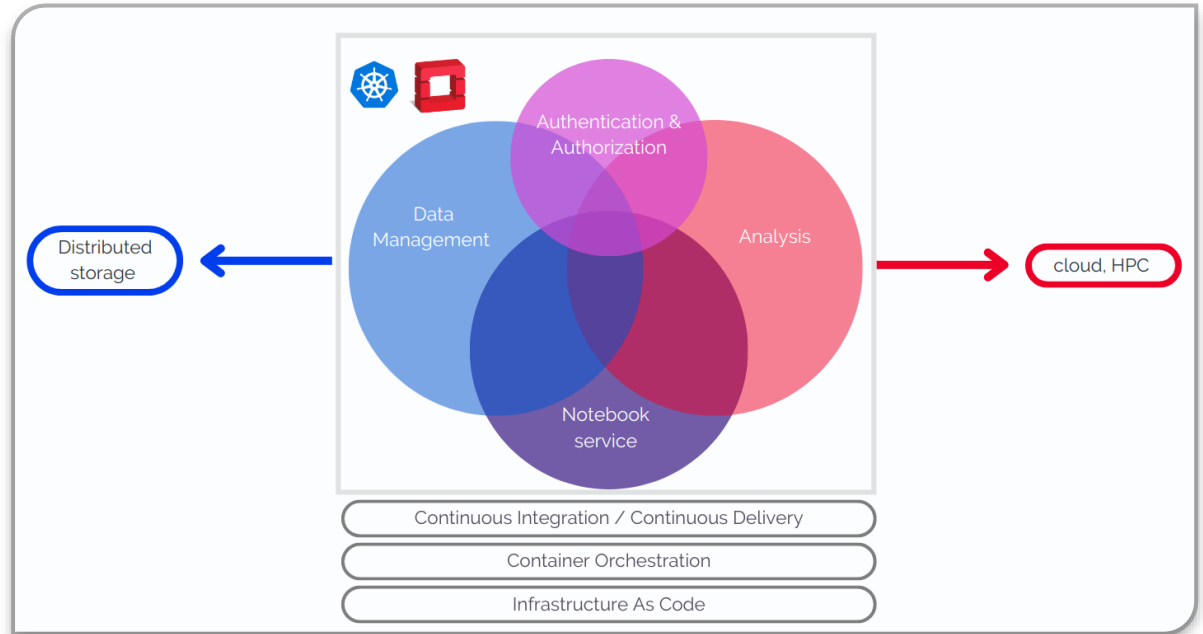
Michael Zengel

25-07-2024

Motivation

Grand Purpose of VRE

- Virtual Research Environment (VRE): simplify life for physicists by combining software in one place
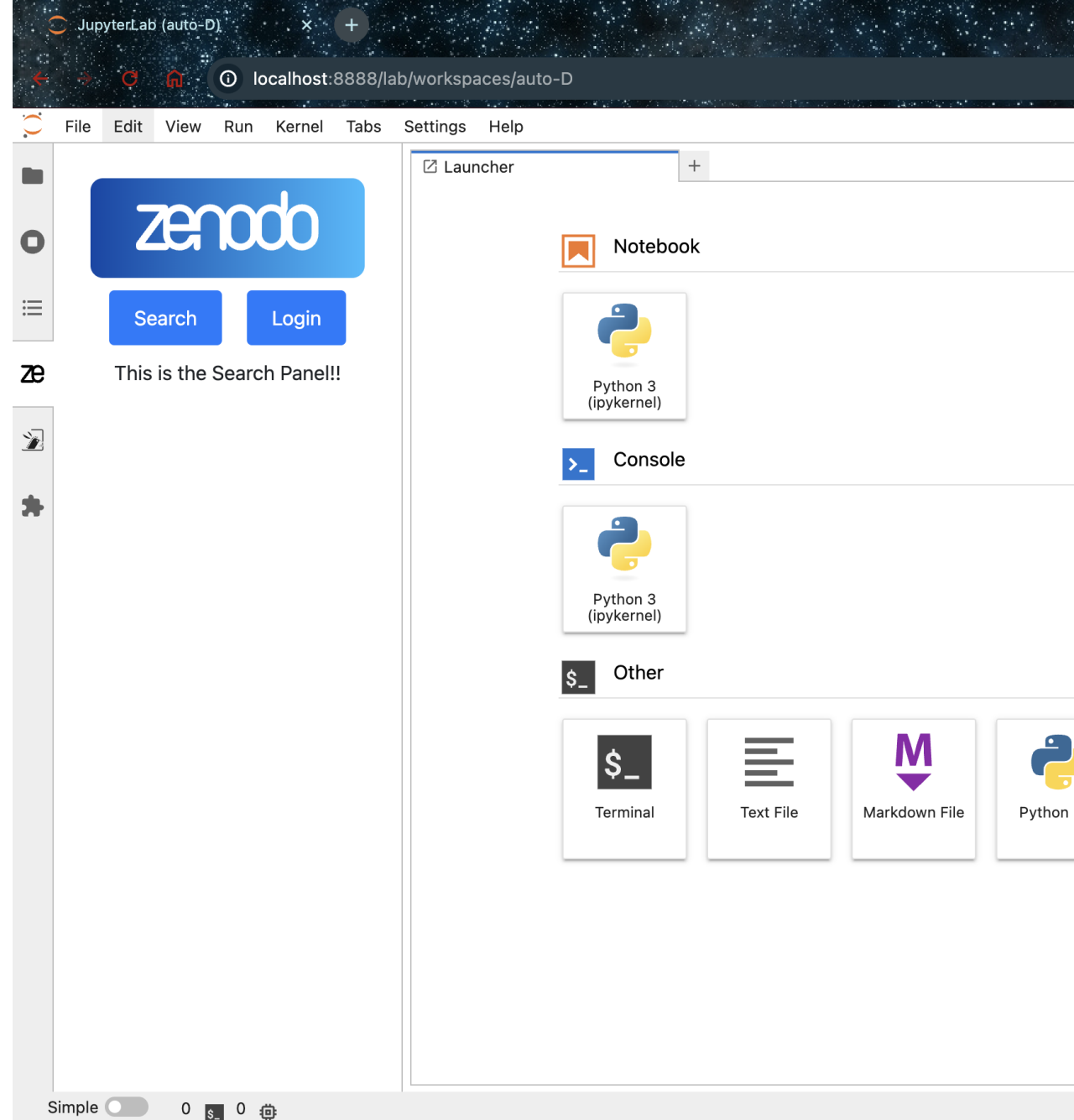
This Project

- Zenodo: Open-source database software for sharing results/code

- Goal: Incorporate into Jupyter Lab (widely used coding software)

  - Increases speed and ease of downloading and uploading data

  - Removes need to separately access Zenodo via either web client or command line interface (CLI)
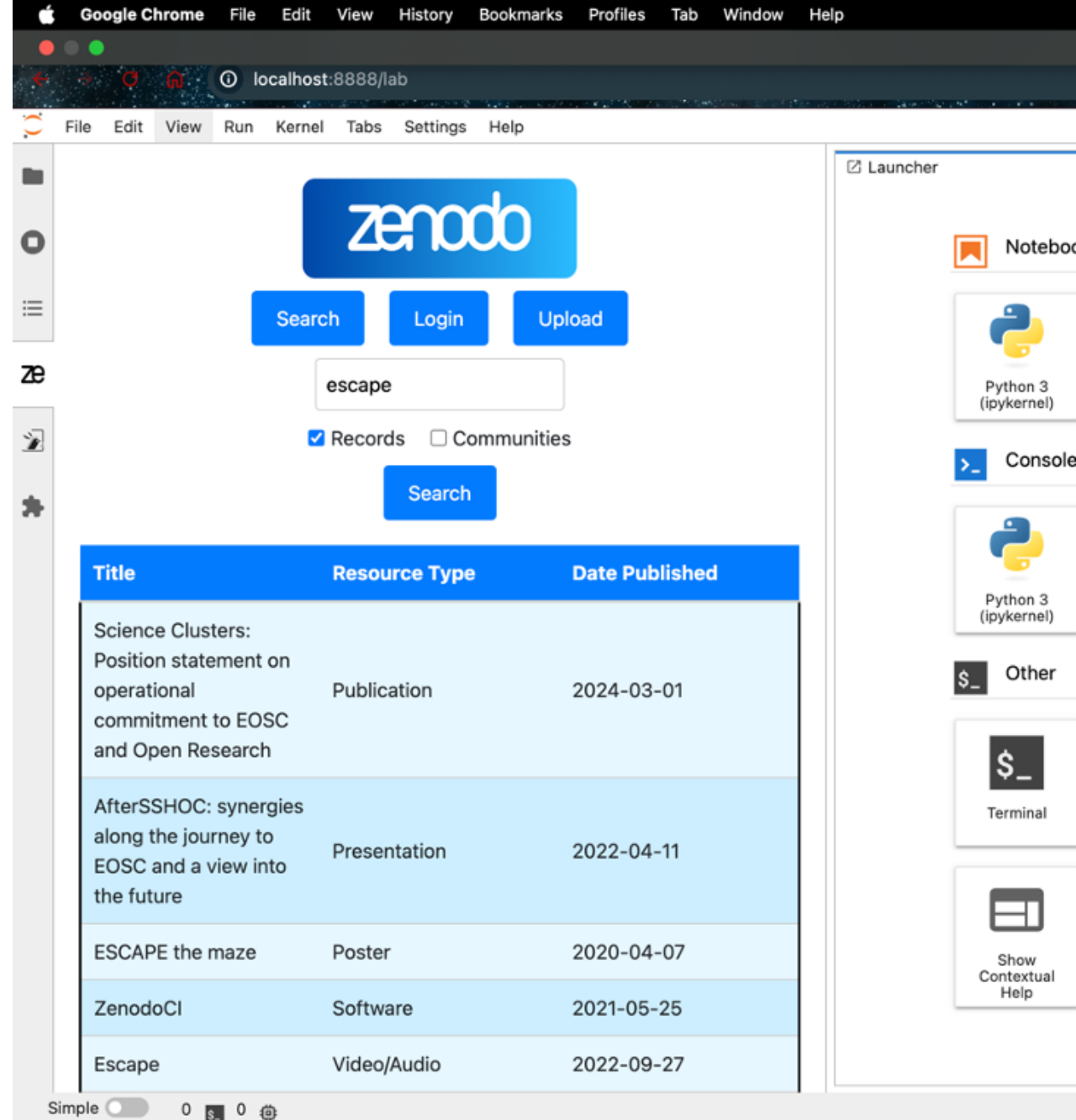
Jupyter Lab Interface

Initial Design (Last Presentation

- Side panel design with separate screens for logging in to Zenodo API and for searching records

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Search Feature (Since Last Presentation)
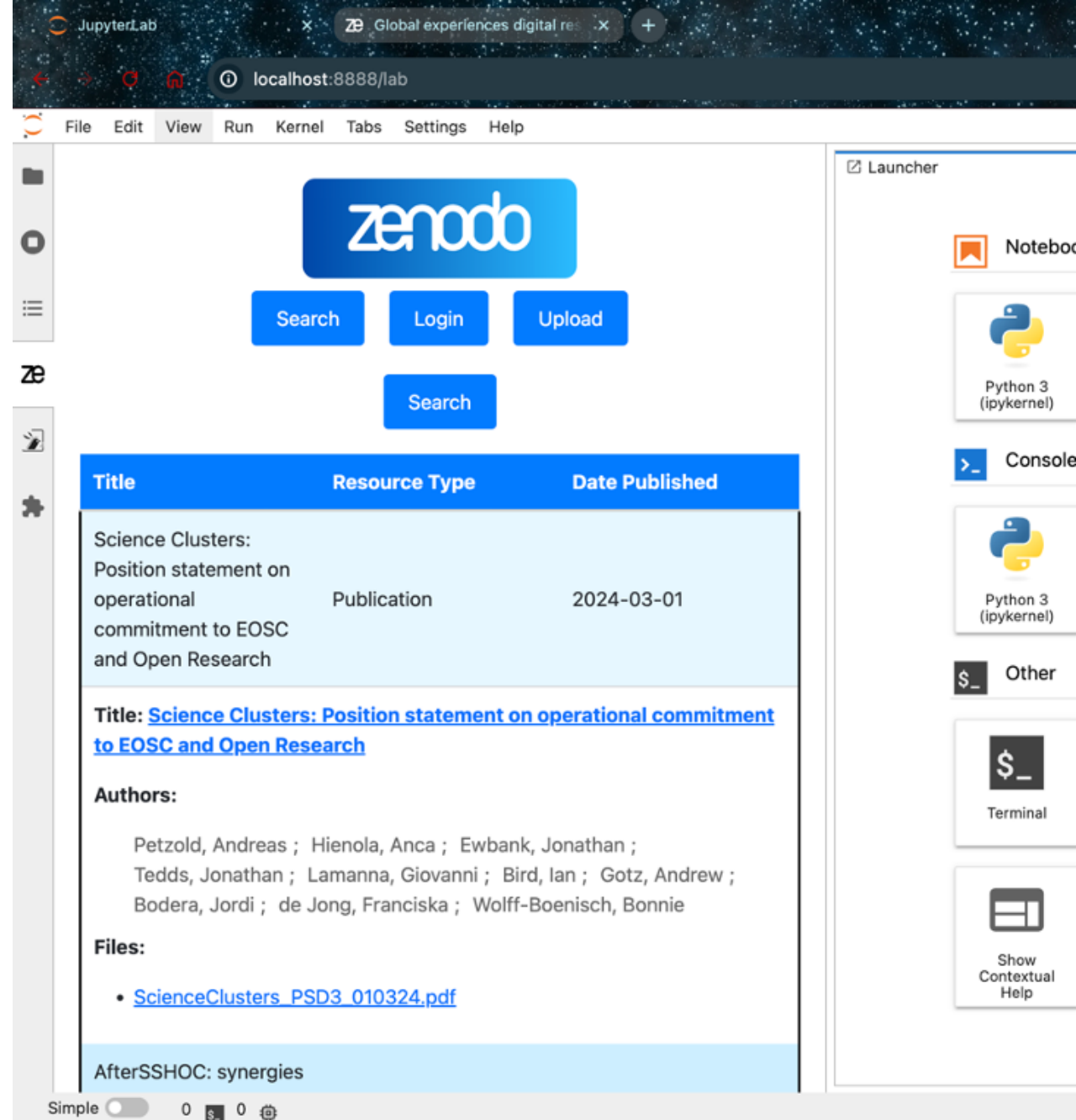
- Search Functionality of records

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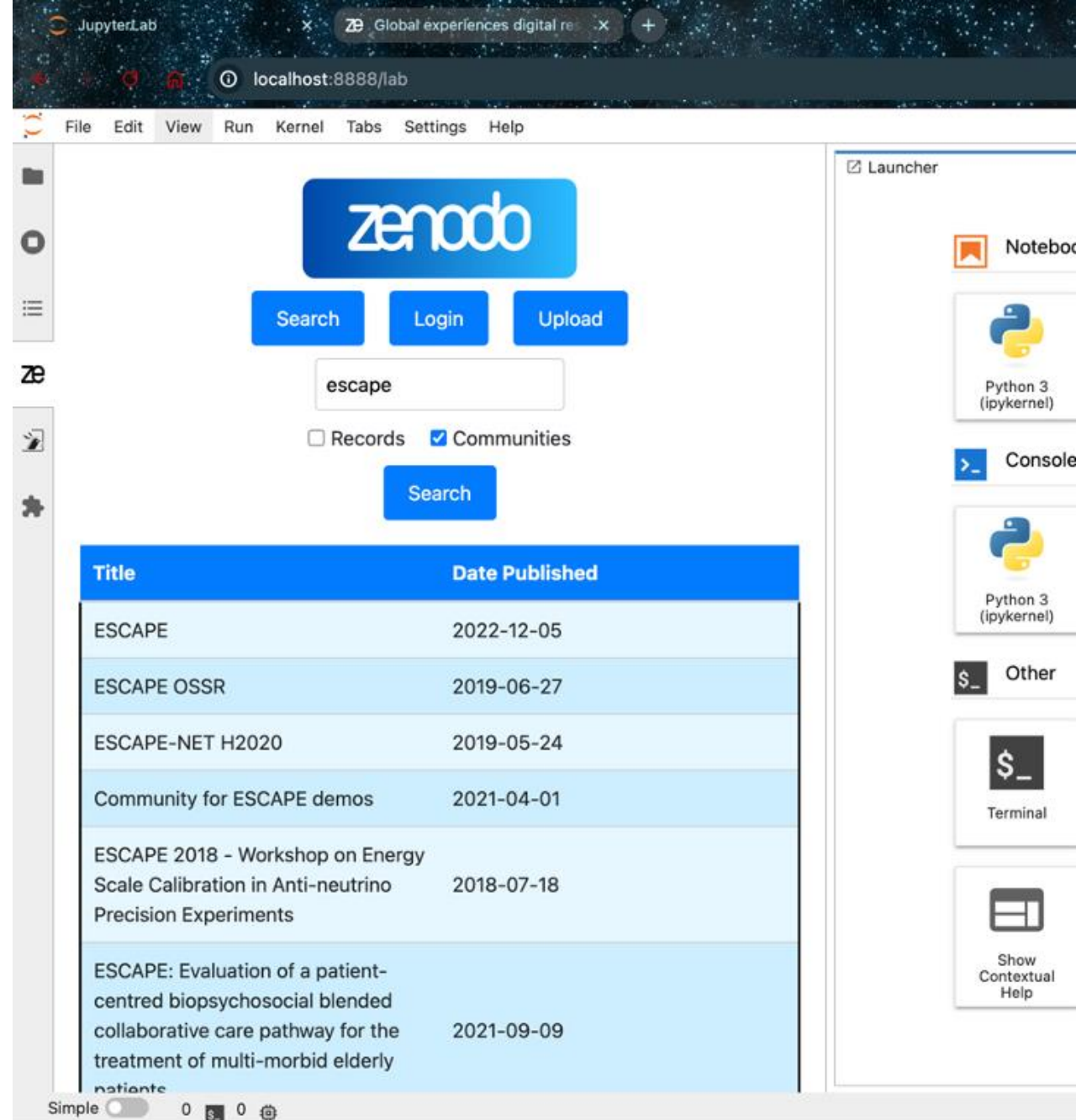
- Record Information Display

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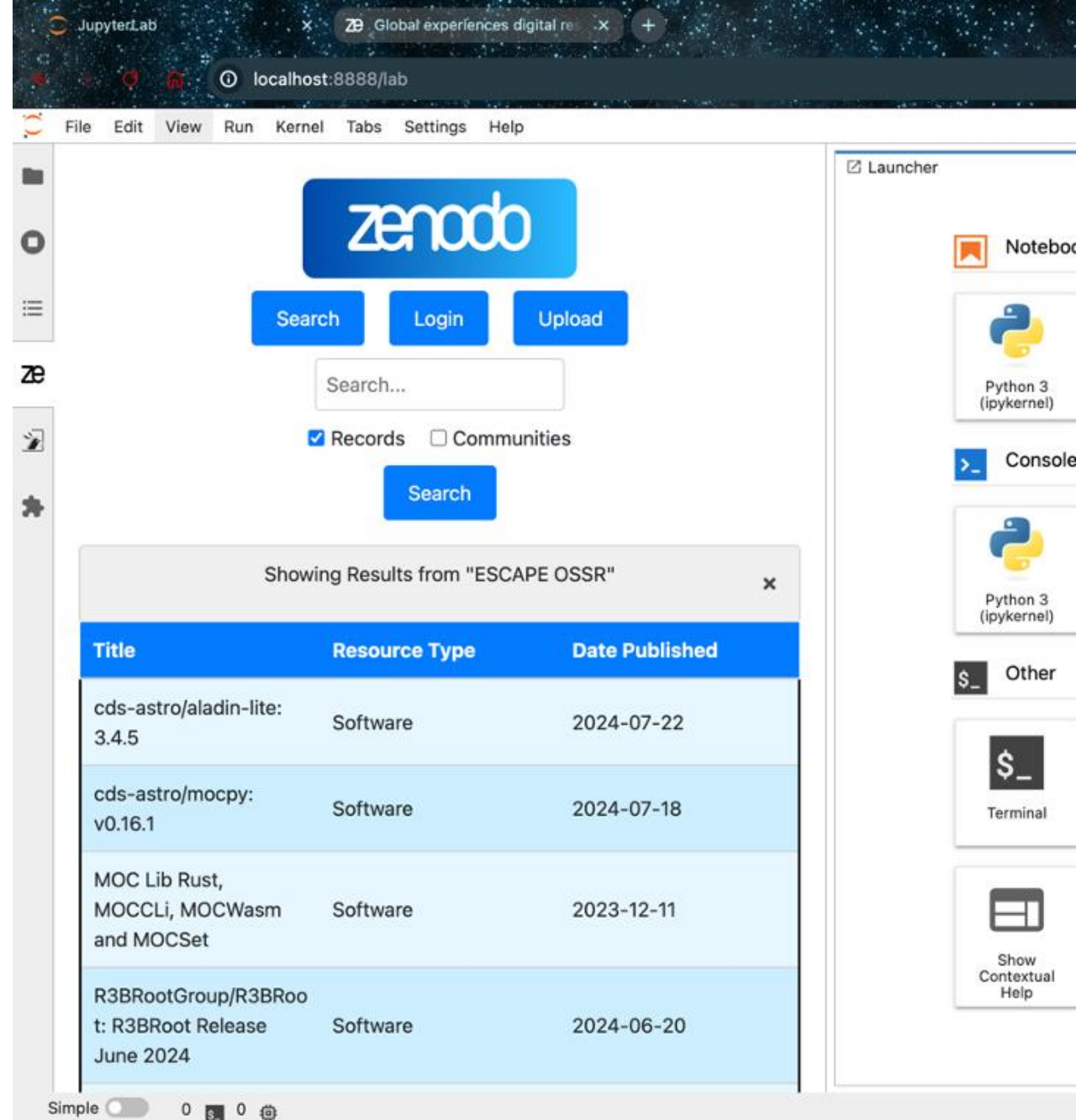
- Searchable Communities

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- Searchable Communities

- Search Records within communities

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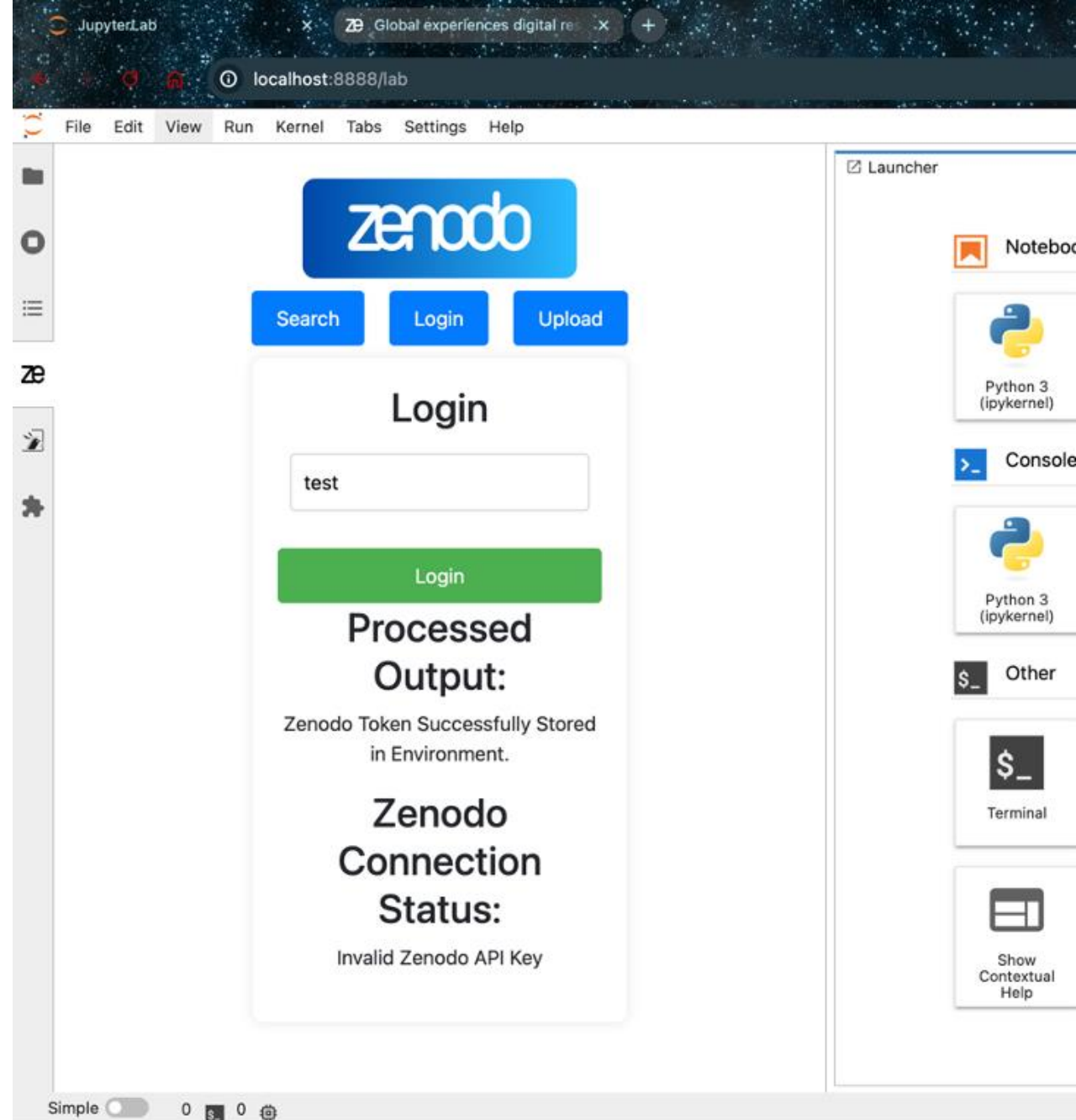
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Login Feature (Since Last Presentation)

*   Login screen that stores Zenodo API token in environment and test validity

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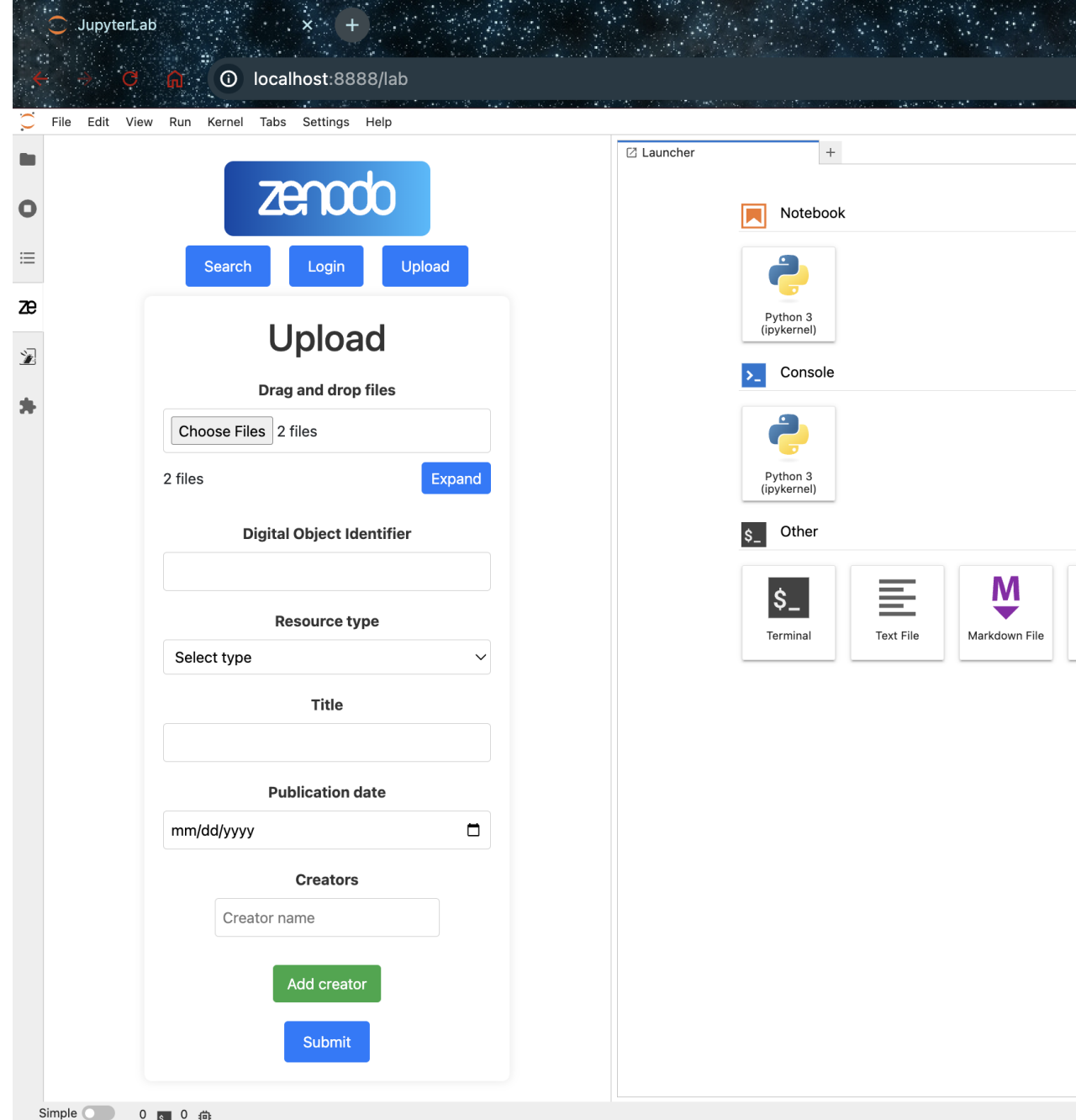- Side panel design with separate screens for logging in to Zenodo API and for searching records

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Login Feature (Since Last Presentation)

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Upload Feature (TBD)
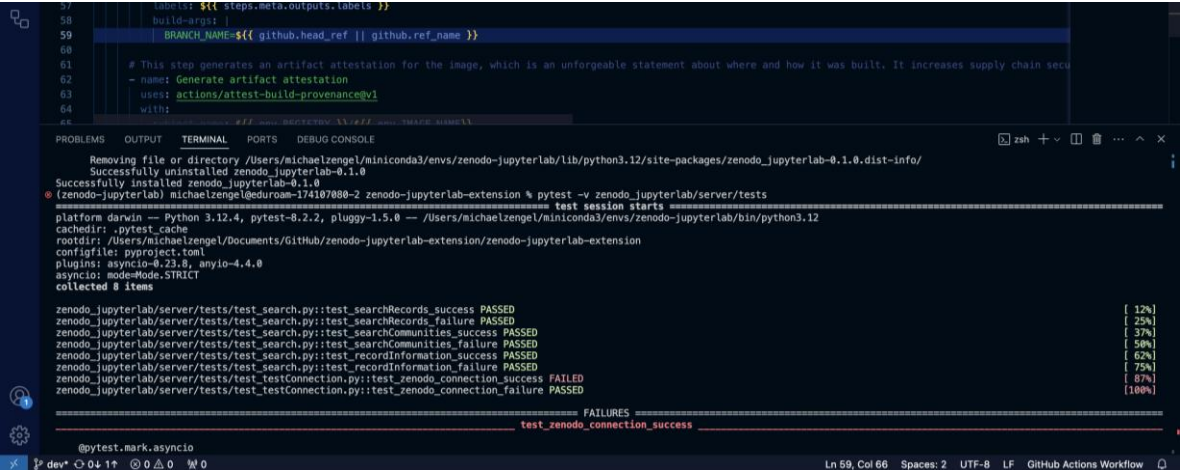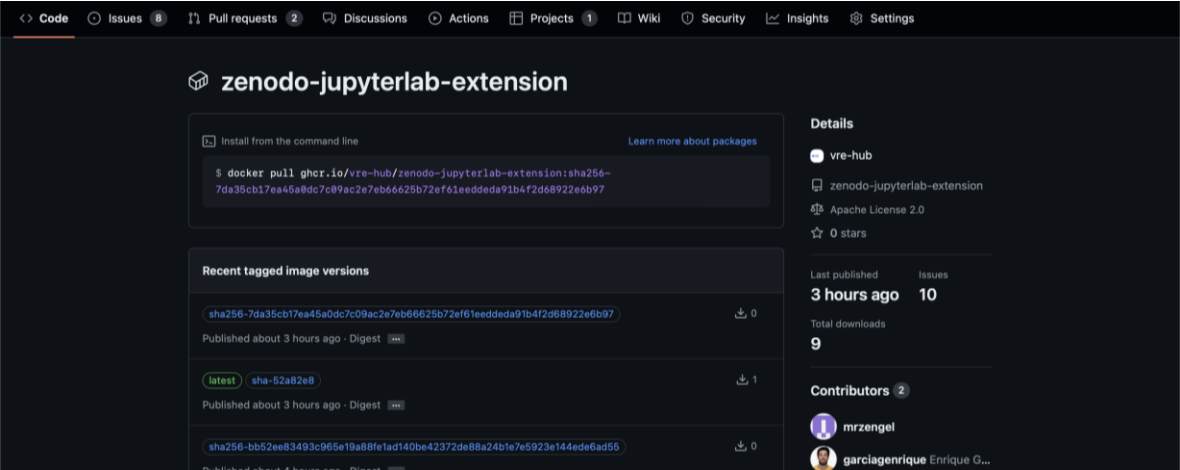
Other Cool Features

Packaging

- Easy install packaging with Docker
- Future Plans:
  - Downloadable Python Package
  - Hosted on VRE Jupyter Hub

Unit Testing

- Tests individual functions in python backend

Jupyter Server Extension

- Uses Jupyter Server extension to run python API connection

Why I was gone for a week