Introduction to Elyra: AI-centric extensions to JupyterLab

Edward Leardi
Saishruthi Swaminathan
Yiwen Li

IBM **Developer**

http://bit.ly/elyra-dax

IBM

About us

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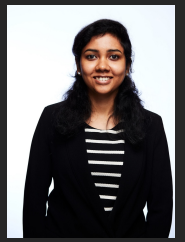

Saishruthi Swaminathan
Developer Advocate & Data Scientist

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Overview

- CODAIT
- Elyra overview
- Data Asset eXchange overview
- DAX pipeline live demo
- Get involved
- Other CODAIT talks

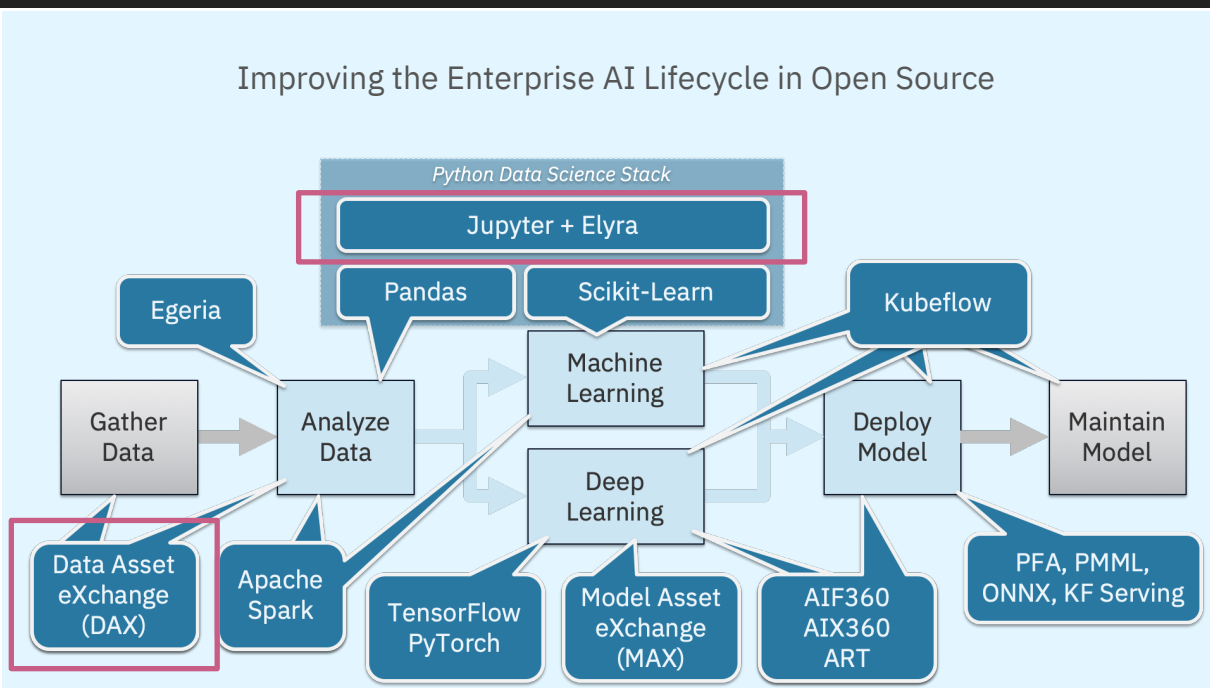
Center for Open Source Data & AI Technologies

CODAIT

Open Source @ IBM

codait.org

- CODAIT aims to make AI solutions dramatically easier to create, deploy, and manage in the enterprise.
- We contribute to and advocate for the open-source technologies that are foundational to IBM's AI offerings.
- 30+ open-source developers!



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Elyra

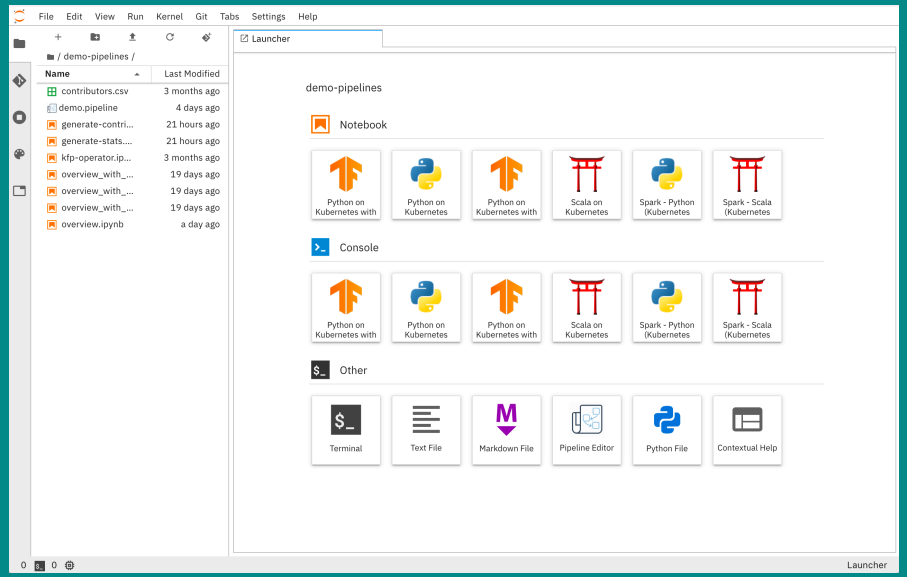
Elyra is a set of AI centric extensions to JupyterLab. It aims to help data scientists, machine learning engineers and AI developer's through the model development life cycle complexities.

Elyra at GitHub

https://github.com/elyra-ai/elyra

Elyra Documentation

https://elyra.readthedocs.io/en/latest/



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Elyra

Notebook Pipelines editor

Visual editor for building notebook-based AI pipelines, enabling the conversion of multiple notebooks into batch jobs or workflows.

Notebook as batch jobs

Elyra extends the notebook UI to simplify the submission of notebooks as a batch job for model training

Code Snippets

Easy creation and insertion of reusable code snippets for the various languages

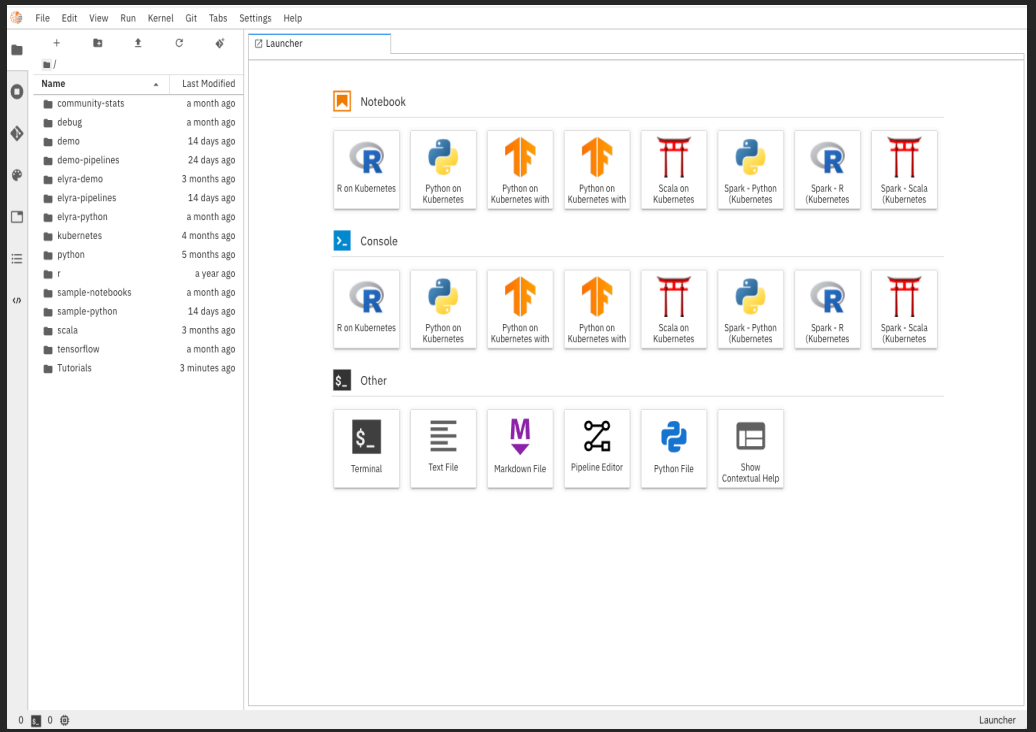
Git integration

Track project changes and share among teammates

Python script execution

Edit and execute python scripts against local or cloud-based resources

JupyterLab Extensions



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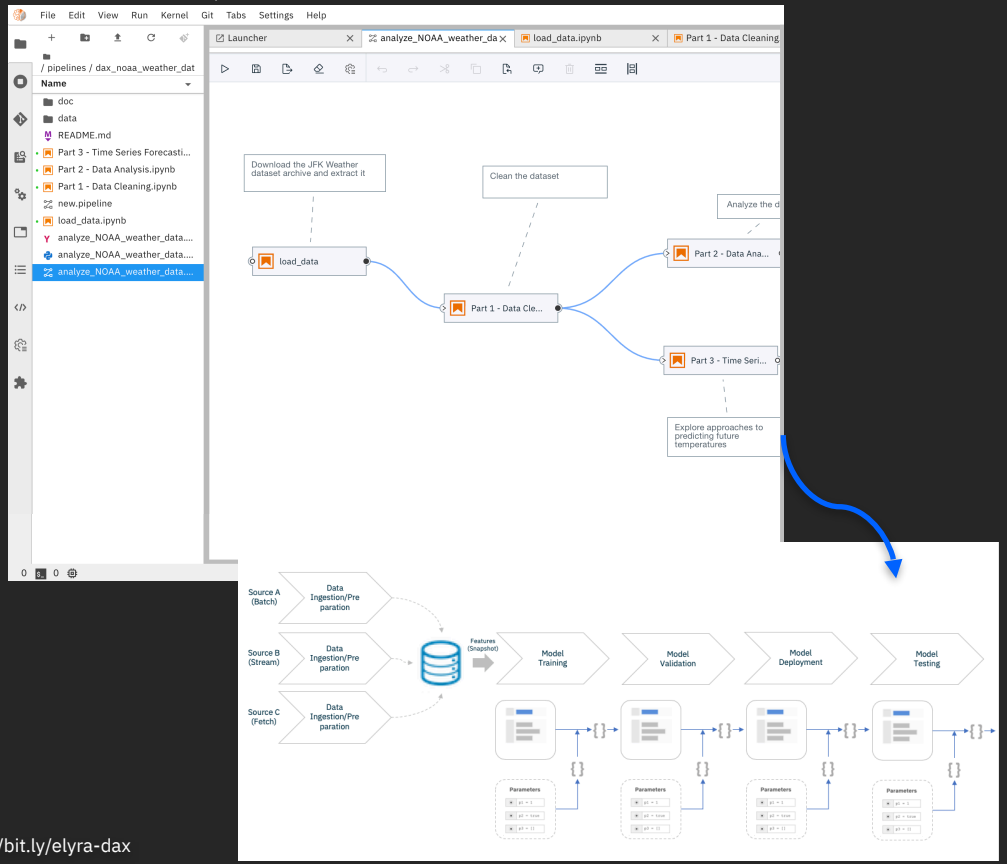

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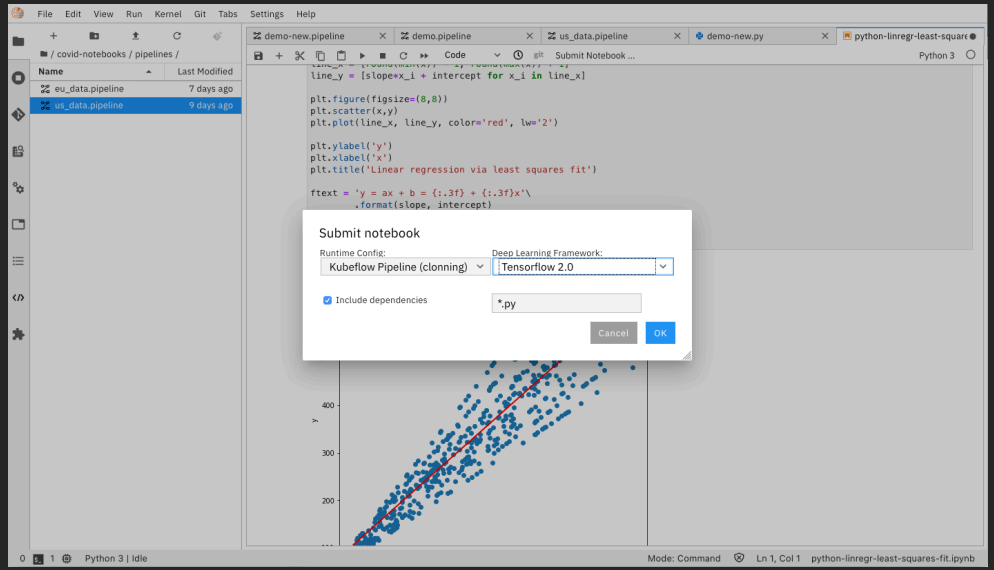

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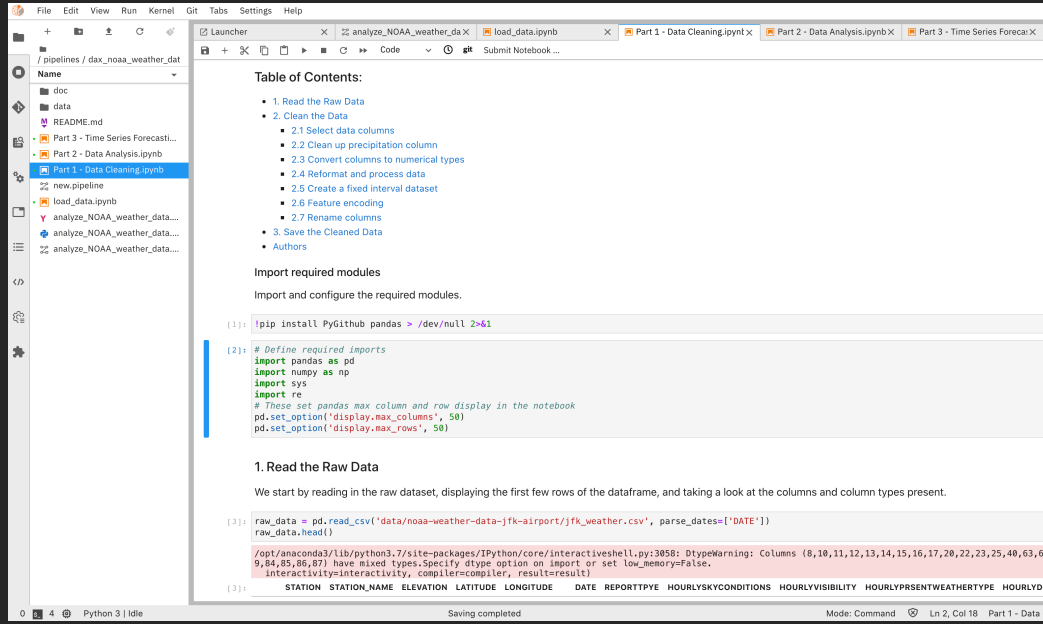

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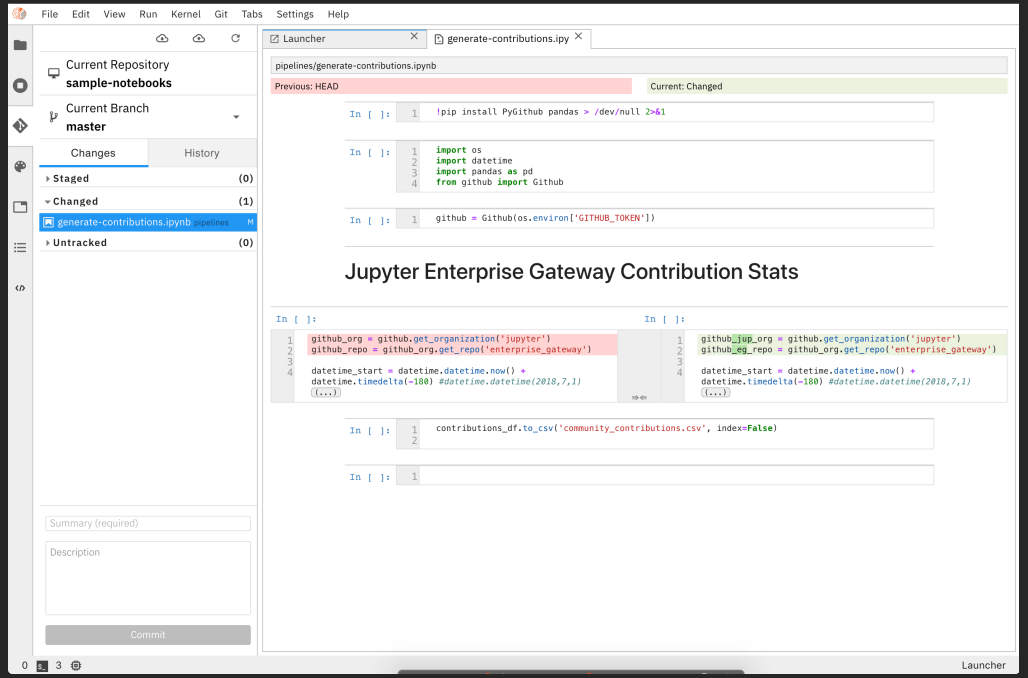

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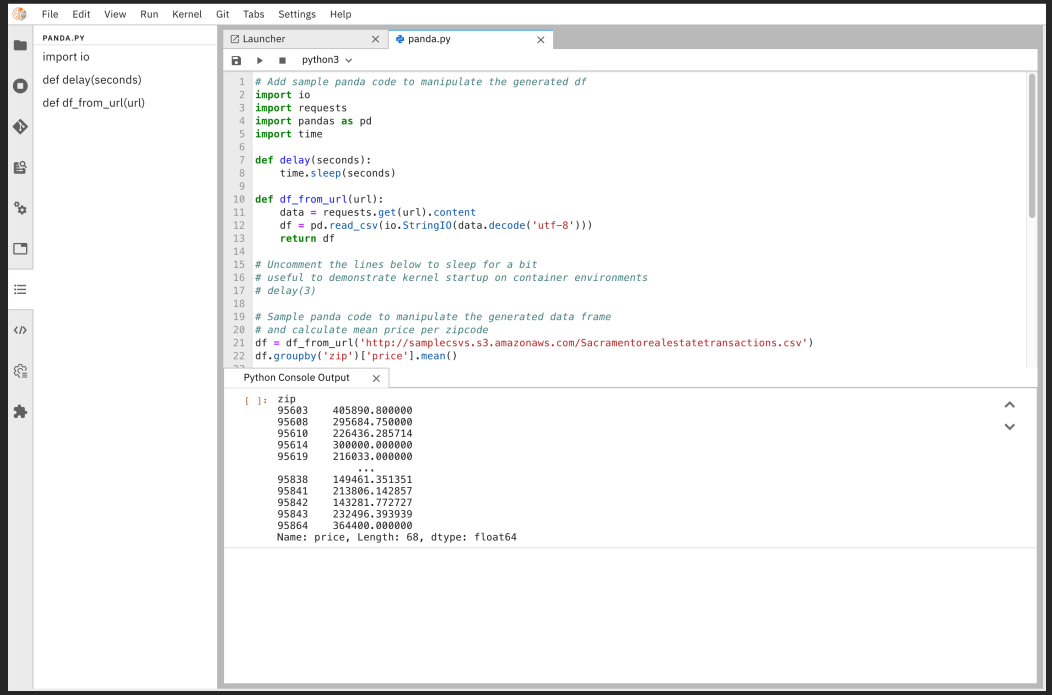

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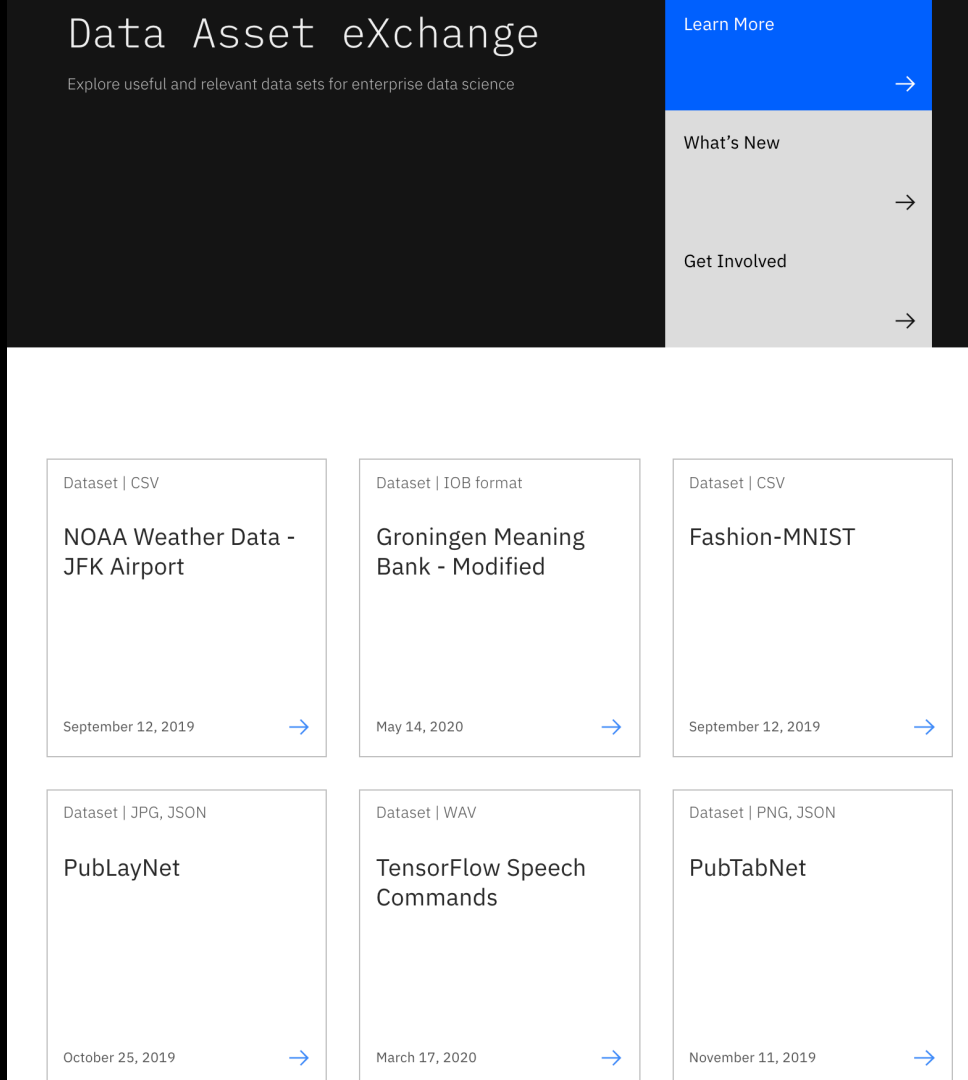
Data Asset eXchange

Data Asset Exchange offers high-quality datasets with clearly-defined open data licenses in standardized formats, according to IBM.

- Vetted data.
- Exclusive access to IBM Research datasets that have been used in creating popular AI products like Debater System, Entity Recognition, and so on.
- Datasets with open data licenses for both business applications and advancing core science.
- Packaged with tutorials that shows how to read and analyze data. As well as, train machine or deep learning models on IBM Cloud using IBM Cloud AI services as well as multi-cloud AI open-sourced tools.

ibm.biz/data-exchange



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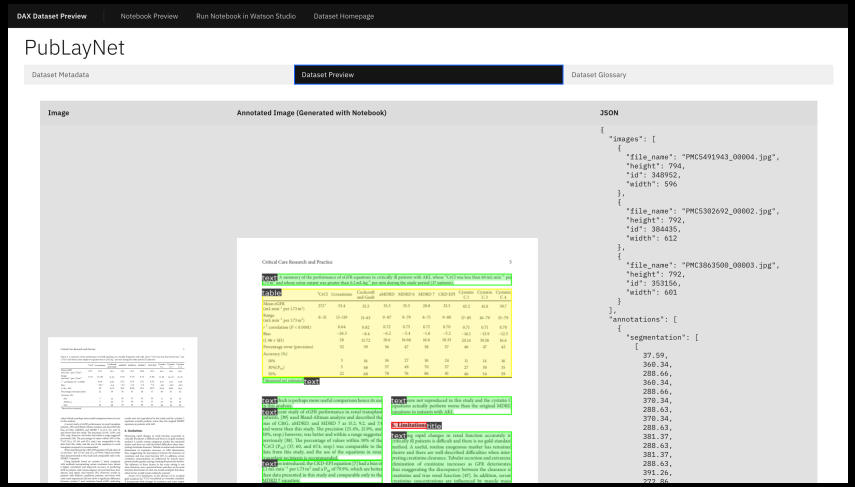
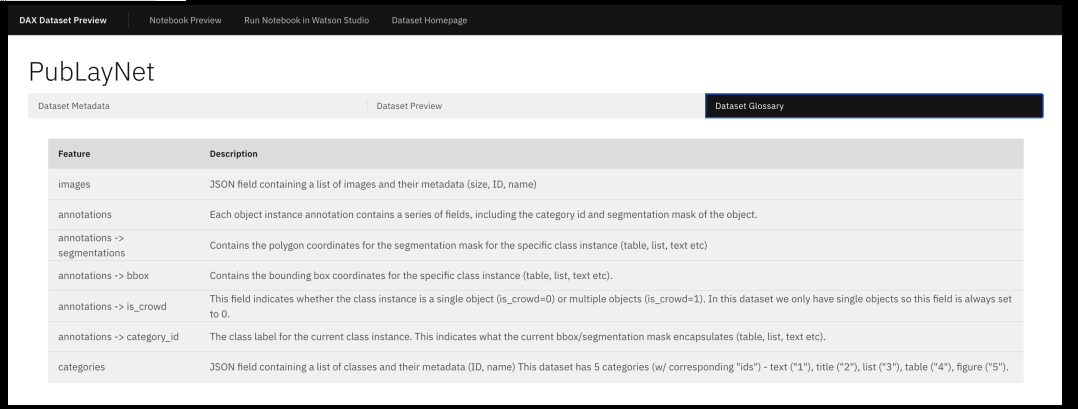
Data Preview and Data Glossary





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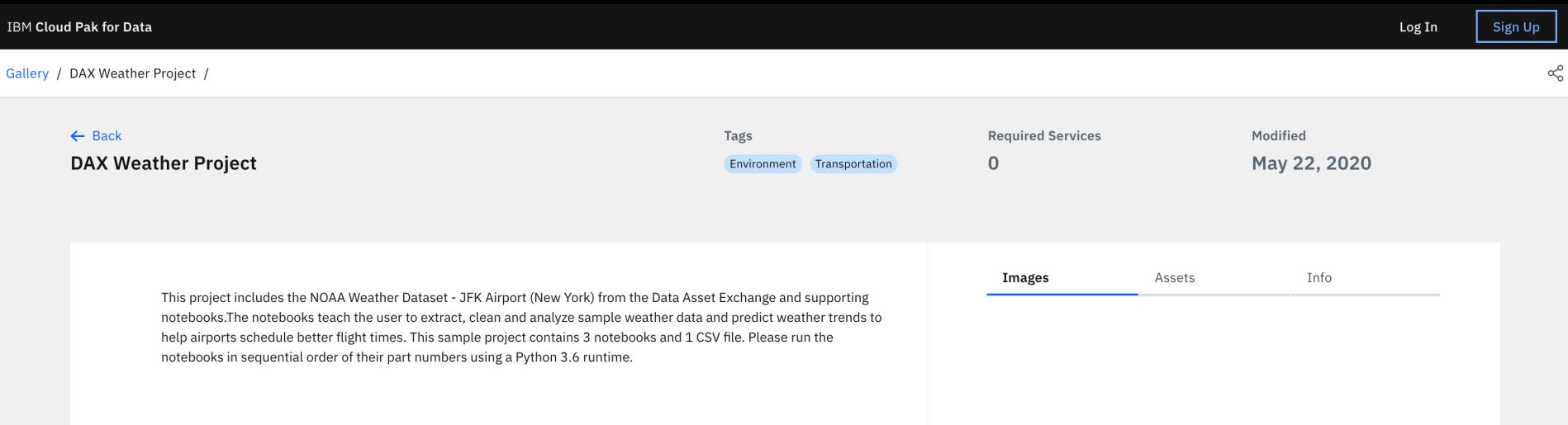
Access notebook in Watson Studio



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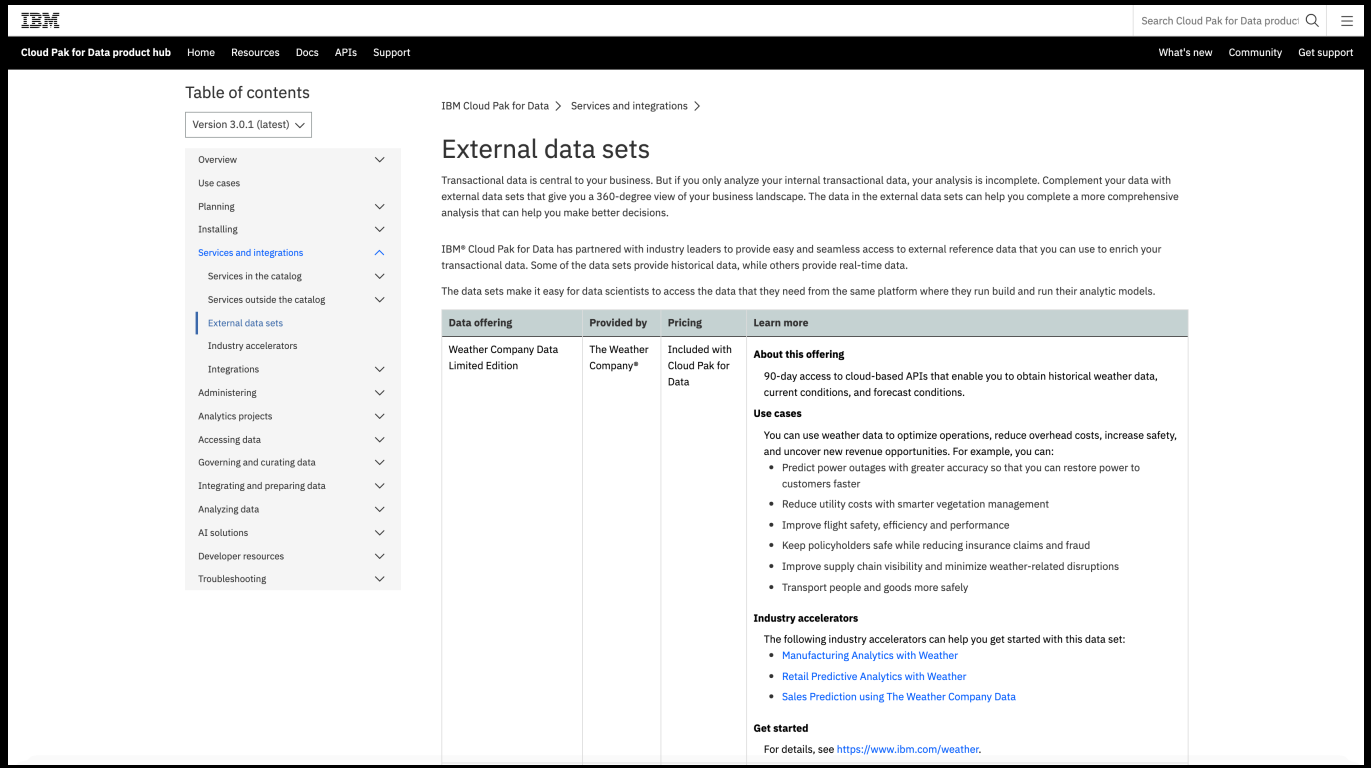
Access from Cloud Pak for Data



https://www.ibm.com/support/producthub/icpdata/docs/content/SSQNUZ_current/svc-nav/data-sets.html

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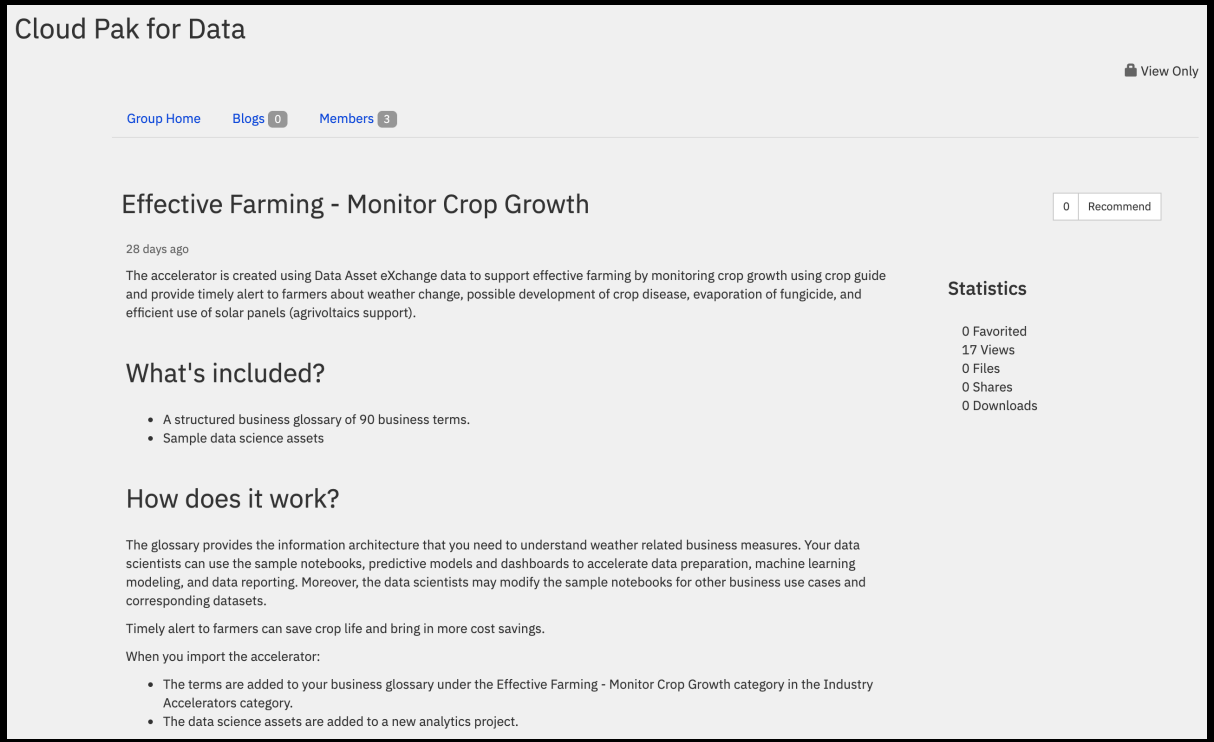
Industrial Accelerator - Cloud Pak for Data



https://community.ibm.com/community/user/cloudpakfordata/viewdocument/effective-farming-monitor-crop-gr

Data Science Process

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Get involved

Getting started with Elyra

https://elyra.readthedocs.io/en/latest/getting_started/installation.html

Elyra's Github

https://github.com/elyra-ai/elyra

Data Asset eXchange

https://developer.ibm.com/exchanges/data/

DAX notebooks Github

https://github.com/elyra-ai/examples/tree/master/pipelines/dax_noaa_weather_data

Contributing to these projects

- Bug reports
- Enhancement requests
- Code reviews

gitter.im/elyra-ai/community

IBM CODAIT talks in JupyterCon 2020

ibm.biz/codait-at-jupytercon2020

- Debugging notebooks and python scripts in JupyterLab
- Using and creating JupyterLab extensions
- A Generic Metadata-Store for JupyterLab extensions
- Intro to Elyra - an AI centric extension for JupyterLab
- What's new on Elyra - A set of AI centric JupyterLab extensions
- Building AI Pipelines with Elyra - A deep dive using COVID-19 Analytics Scenario
- Explore and Extend AI Pipeline Runtimes with Elyra and JupyterLab

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