AI on Demand
Knowledge and services
for the AI community

AIoD

AI on-demand

A user guide for the AI research and innovation community

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AI on-Demand platform

Why?

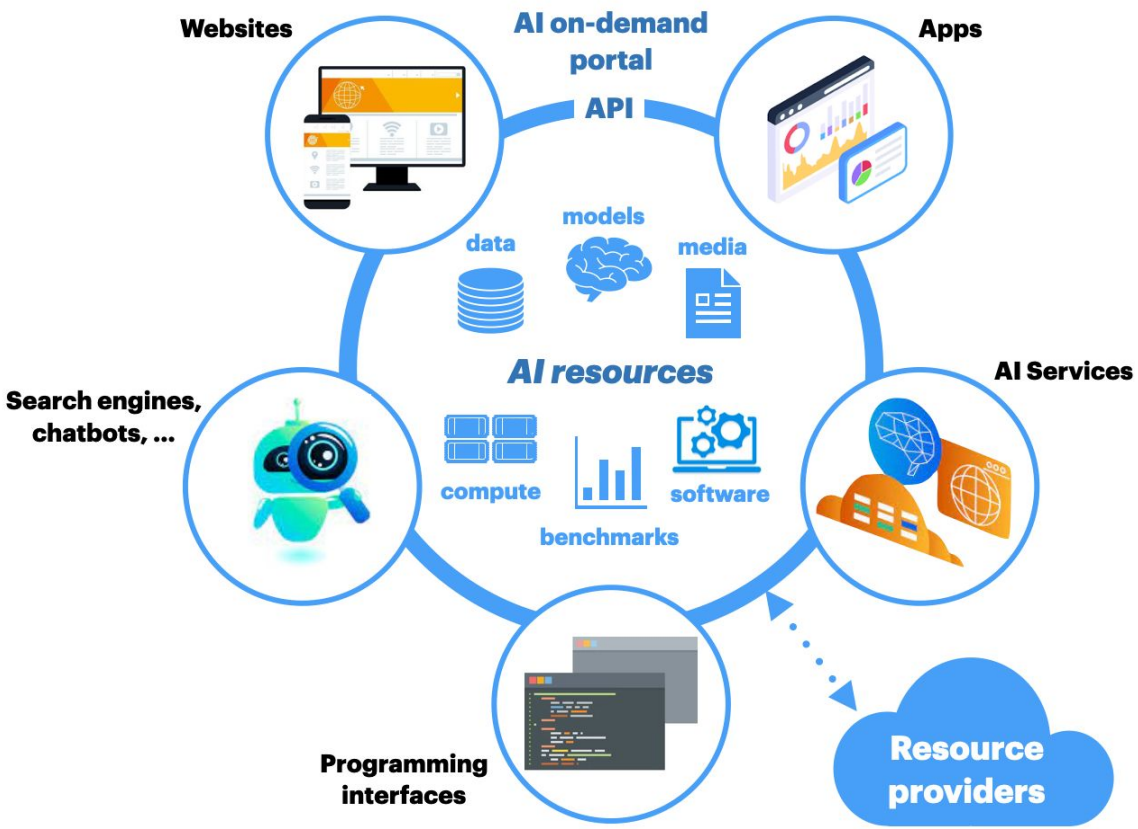
- **Bring together Europe's existing and new AI data, software, services, platforms, computational resources, and expertise**
- Support the needs of Europe's AI researchers, developers, educators and students

How?

- Easy-to-use interfaces to find AI resources
- Integrate (don't duplicate) AI services and platforms and build new ones on top of the AIoD platform

What?

- AIoD resource catalogue (distributed)
- Search engines and chatbots (in progress)
- API to exchange resources, integrate and build
- Services to perform AI tasks (e.g. experiments)



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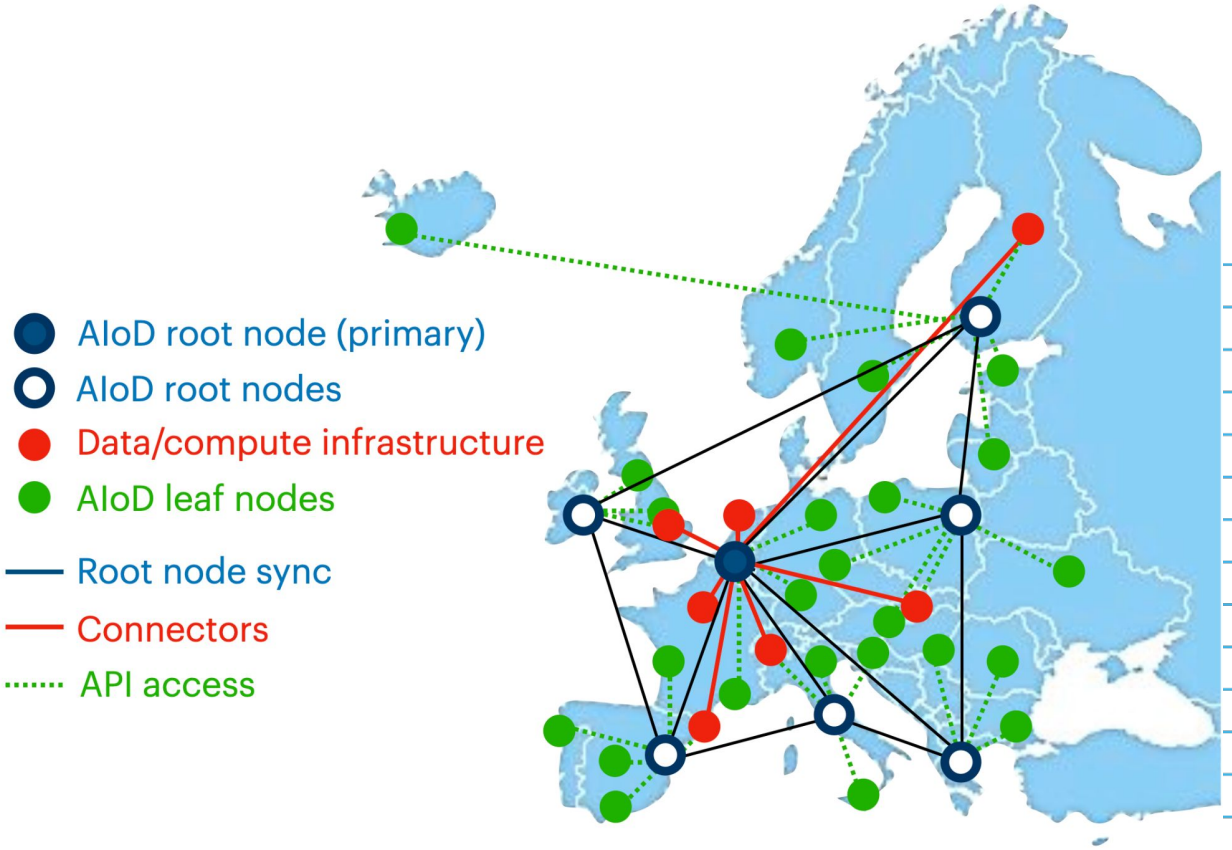
A decentralised AIoD platform

Distributed architecture:

- ***AIoD nodes***
  - run core AIoD services (e.g. AI resource catalogue, experimentation services,...)
  - Federated with existing data and compute infrastructure (by running *connectors*)
- ***AIoD leaf nodes***
  - run (your own) services built on top of the API or other services
  - facilitates integration of (existing) local services and resources.
- External resources
  - provide external resources (e.g. data and compute), integrated with connectors



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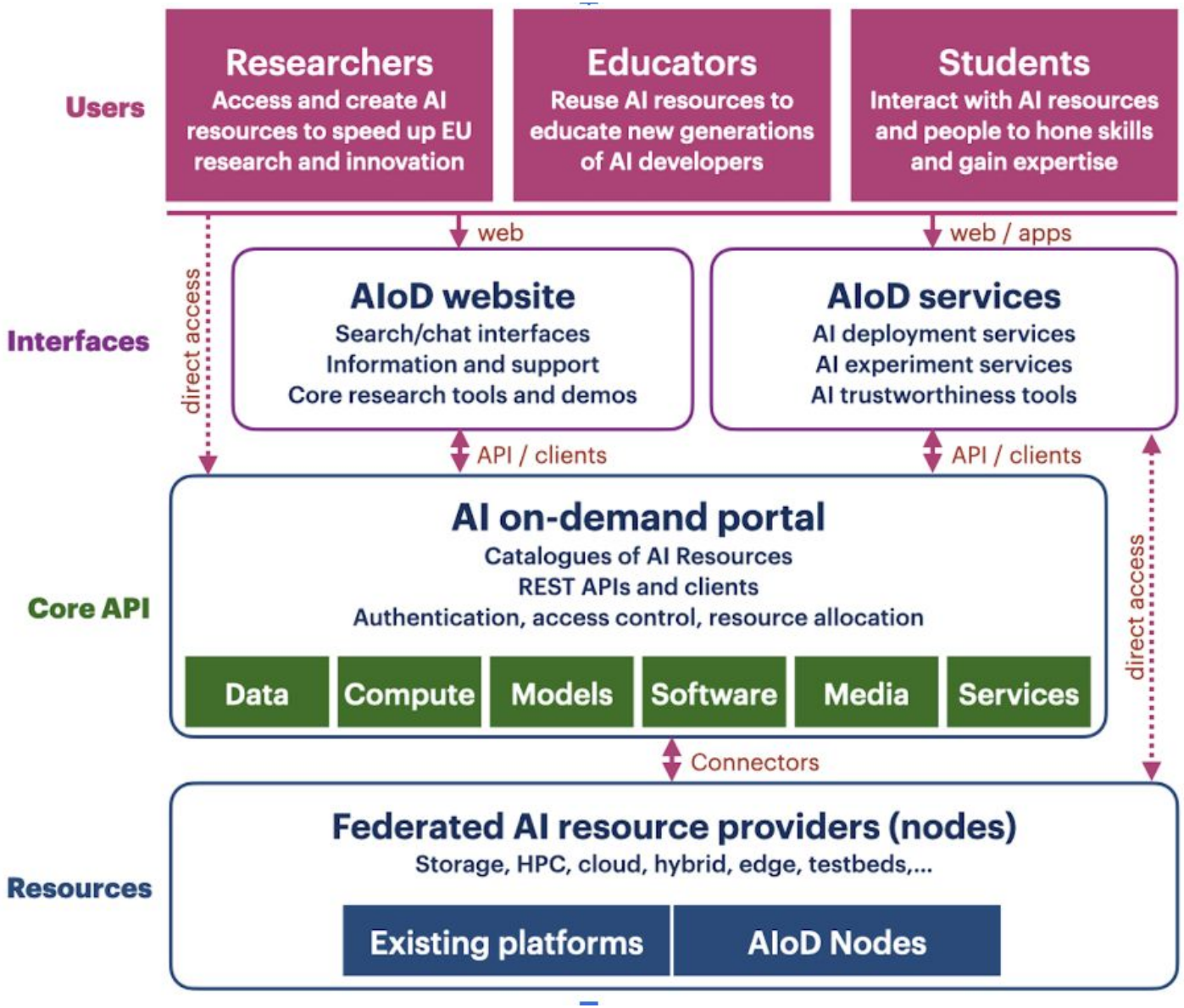
The AIoD Software Architecture (nodes)



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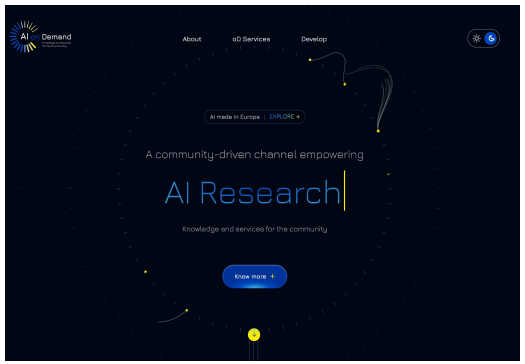
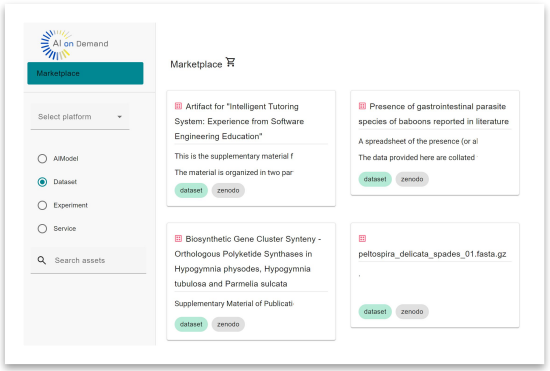
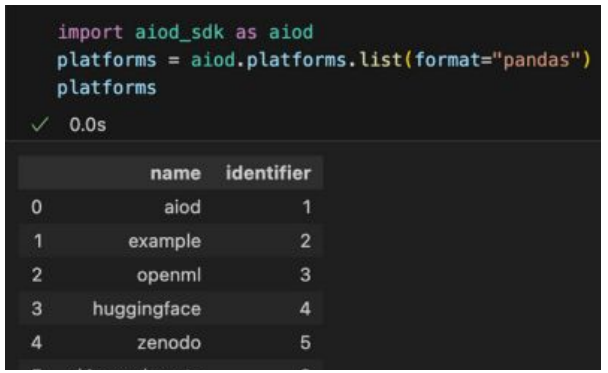
Diverse interfaces for diverse users



Web portal
general information



Search
search for AI resources



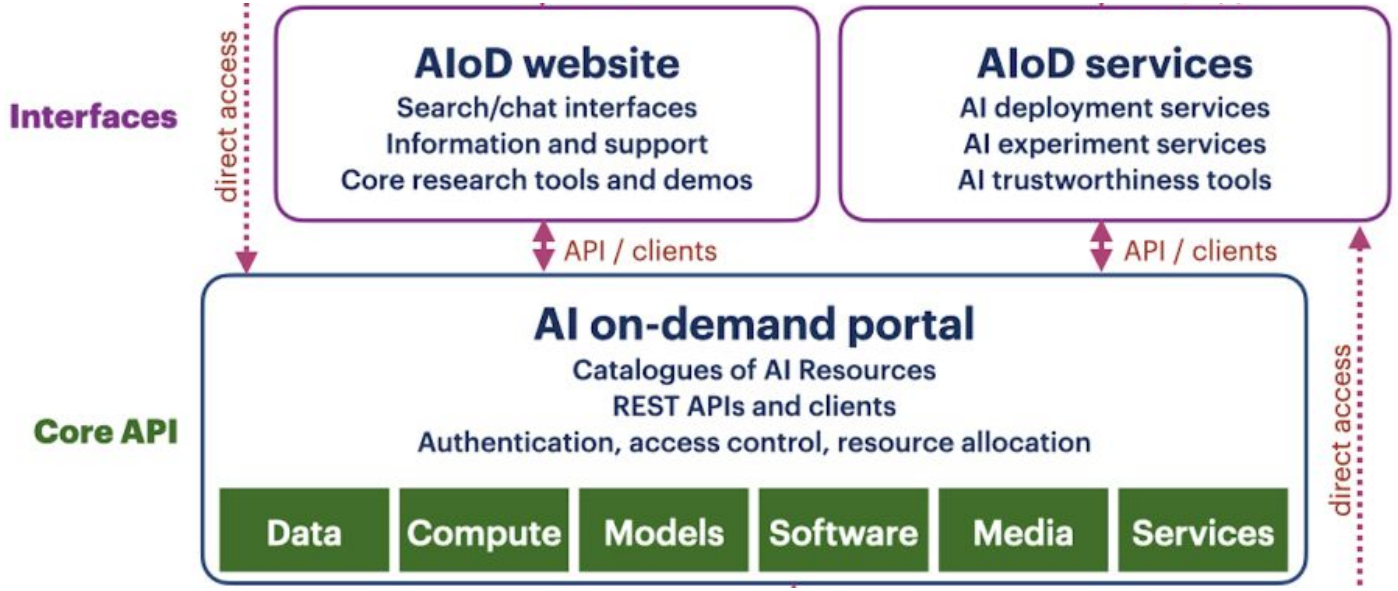
```
import aiod_sdk as aiod
platforms = aiod.platforms.list(format="pandas")
platforms
```

0.0s

	name	identifier
0	aiod	1
1	example	2
2	openml	3
3	huggingface	4
4	zenodo	5

API
programmatic access

Services
advanced interfaces



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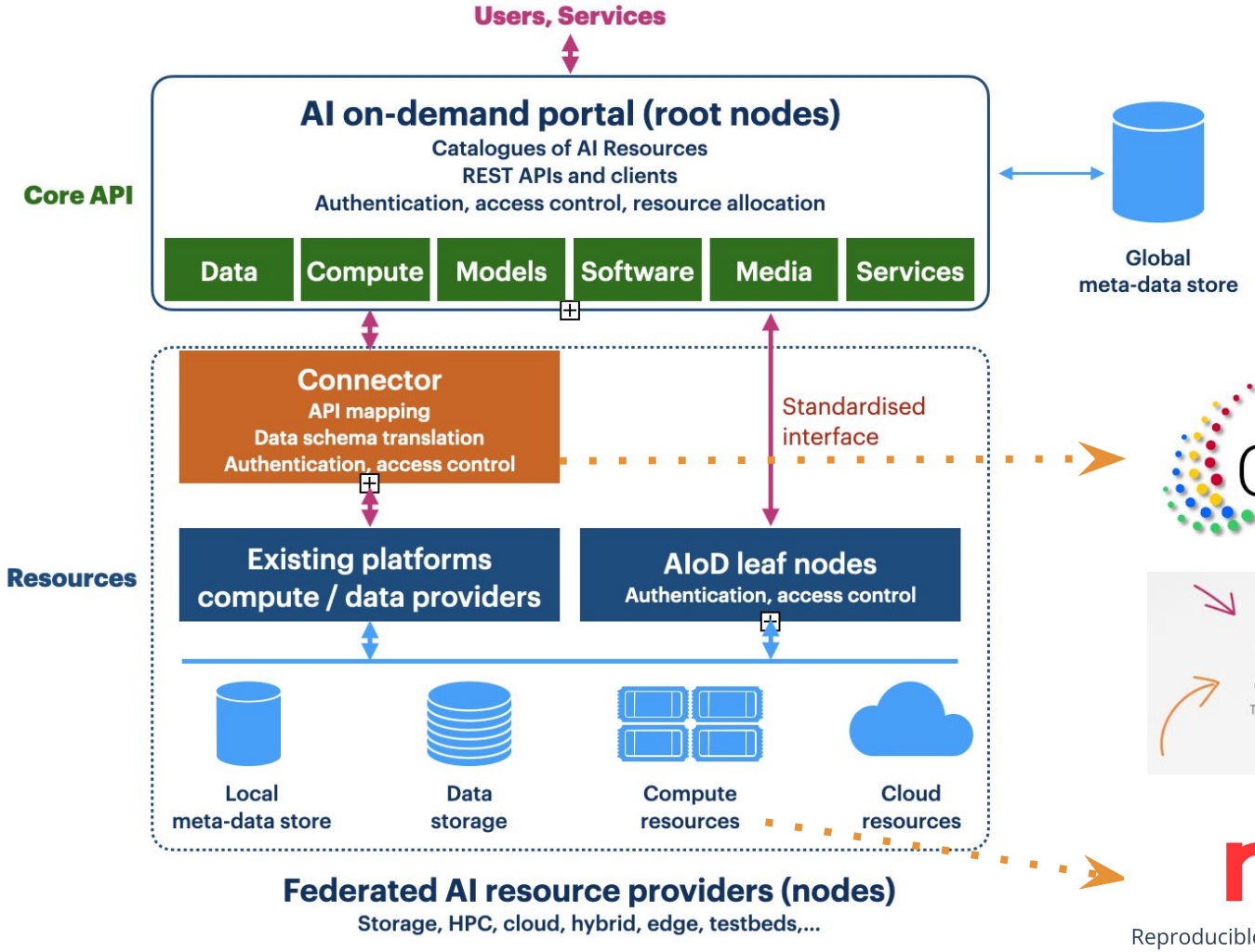
Integration with other platforms



OpenML

Hugging Face

zenodo
The place to share your research results

reana
Reproducible research data analysis platform

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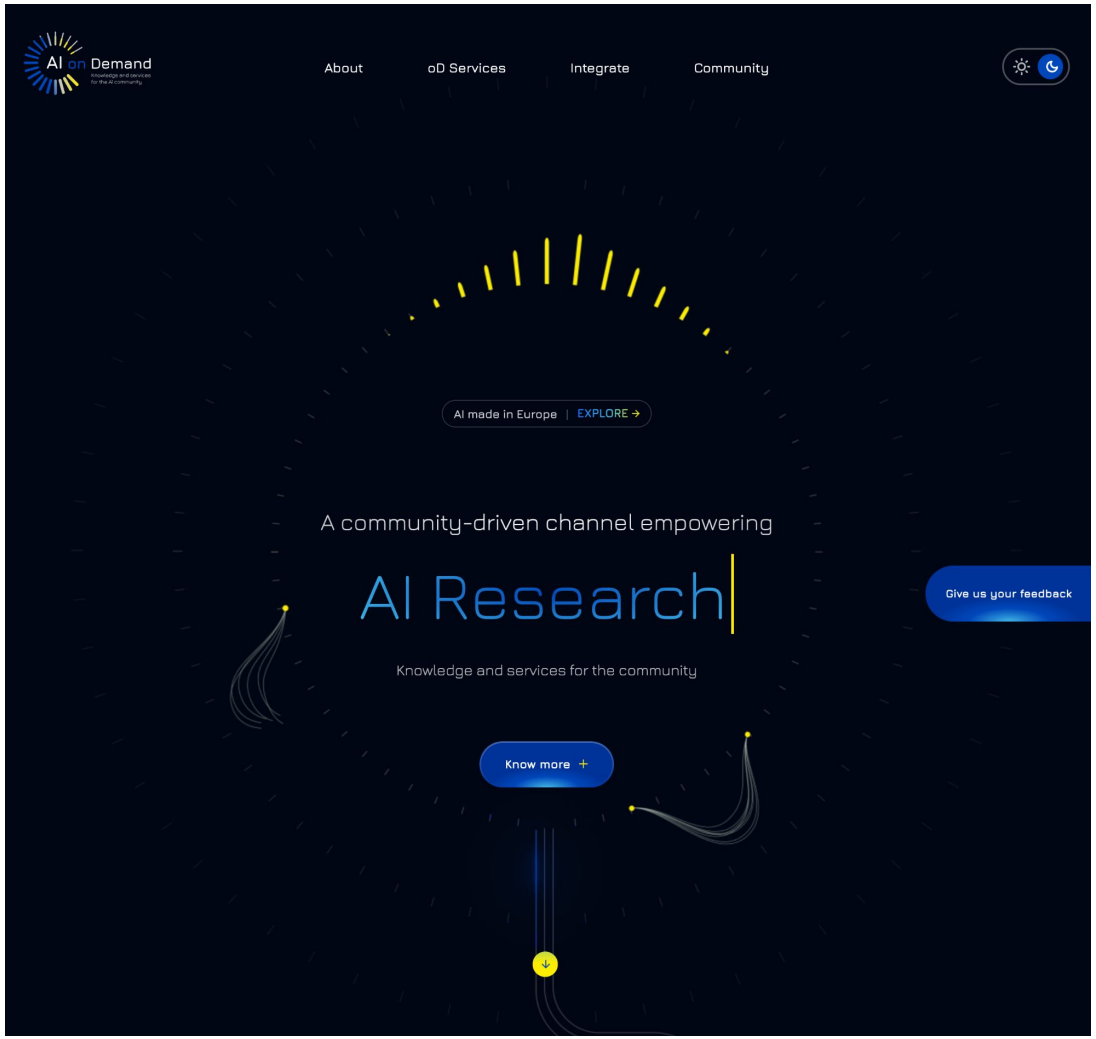
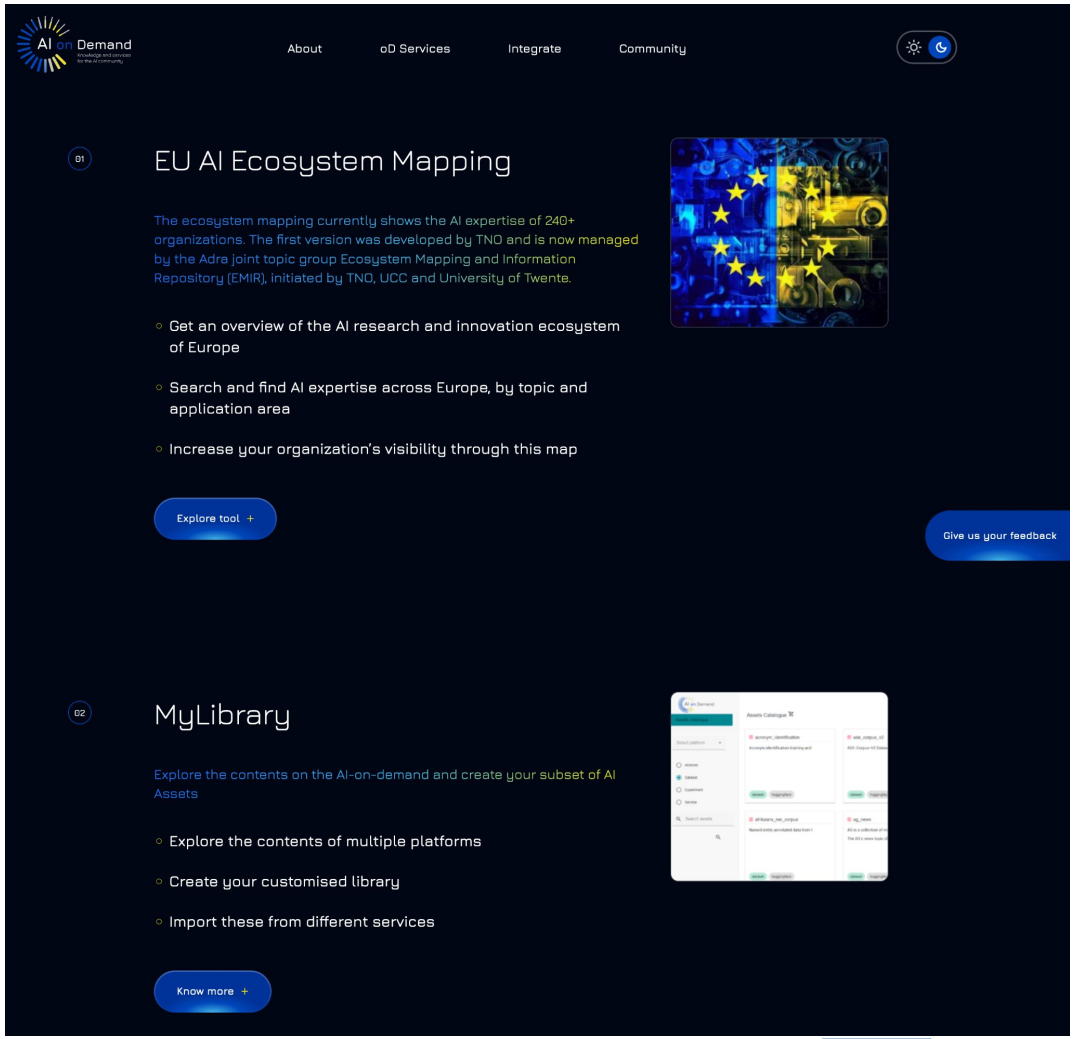
Interfaces: The AIoD portal (current)





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The Portal (reimagined)

AI on Demand

Overview | Resources | Services | Community

Login

- AI Resources
- Catalogue
- About
- Feedback

AI Resources

Explore our extensive AI Catalogue

Search for anything...

Select platform | Select type

Suggested Queries: Lorem Ipsum | Lorem Ipsum | Lorem Ipsum | Lorem Ipsum

AI4 | eosc

Powered by AI4eosc marketplace

Join our community, grow your knowledge and learn from others!

Sign In

Don't have an AIoD account? Sign up

Collapse

3d Body Detection								
Type AI Model	Platform	Hugging Face	Badge	Availability v1.1	Related resources	Sep 25, 2024	44.5k	14k
3d Body Detection								
Type AI Model	Platform	Hugging Face	Badge	Availability v1.1	Related resources	Sep 25, 2024	44.5k	14k
3d Body Detection								
Type AI Model	Platform	Hugging Face	Badge	Availability v1.1	Related resources	Sep 25, 2024	44.5k	14k
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Type AI Model			Badge	Availability v1.1	Related resources	Sep 25, 2024	44.5k	14k

The Portal (reimagined)

AI on Demand

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Login

RAIL

Experiments
- Public Experiments
- My Experiments
- Create Experiment

Templates
- Public Templates
- My Templates
- Create Template

Datasets

Documentation

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RAIL > Public Experiments

Search...

665f324b2490e7270324a1fa

Summarization experiment

Dec 14, 2023

Go to detail | Show more

665f324b2490e7270324a1fa

Machine Translation experiment (user-defined model)

Dec 14, 2023

Go to detail | Show more

665f324b2490e7270324a1fa

Machine Translation experiment (env-var model)

Dec 14, 2023

Go to detail | Show more

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Machine Translation experiment (env-var model)

Dec 14, 2023

Go to detail | Show more

665f324b2490e7270324a1fa

Machine Translation experiment (env-var model)

Dec 14, 2023

Go to detail | Show more

https://www.youtube.com/@AIonDemand

The Portal (reimagined)

AI On Demand

Overview | Resources | Services | Community

Login

- Integrate Your Service
  - Getting Started
  - AIoD API - Metadata Catalogue
  - Documentation
  - Support

Join our community, grow your knowledge and learn from others!

Sign In

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Collapse

Integrate Your Service > Getting Started

AIoD Software Developer's Tools

AI-On-Demand Platform | 14 videos | 302 visualizações

1:11 / 2:58

Getting started 3/12 Completed

01. Consectetur adipiscing elit ✓

02. Mollit voluptate adipisicing ✓

03. Officia pariatur Lorem sit ✓

04. Avoluptate adipisicing ▷

05. Exercitation elit incididunt esse

06. Deserunt pariatur eiusm

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The Portal (reimagined)

AI Demand

Overview | Resources | Services | Community

Login

- Community
  - Press Corner
  - AI NoE
  - Sucess Stories
  - Forum

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Community › Press Corner › Events

News | Events | Newsletters | Projects

Upcoming Events

Digital SME Summit 2024

Qui aliquip quis magna non sint voluptate officia qui. Laborum sit mollit id sint et dolore conseq

UI/UX Design

UI Design, a User-Centered Approach

UI/UX Design

Pick Awesome Color Palette for Your App

UI/UX Design

Principles of Great UI Design System

The Portal (reimagined)

AI on Demand

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- Community
  - Press Corner
  - AI NoE
    - Map
    - Statistics
    - Topic & Applications
    - Information
  - Sucess Stories
  - Forum

Community › European AI research and innovation ecosystem › Map

Enter keyword

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European AI Networks of Excellence (click on a logo to filter by network)

VISION | AI4media | dAIEDGE | ELIAS | elise | elsa | ENFIELD | euROBIN | HUMANE AI NET | TAILOR

The Portal (reimagined)

AI Demand

Overview Resources Services Community

Login

Dashboard

Notifications 9

Contribute

Dissemination Requests

Resources Saved

Settings

Welcome back, Pedro!

Relevant for you

Discover a handpicked selection of news, events, and resources tailored just for you, based on your unique interests and activities.

AI Model

UI Design, a User-Centered Approach

Dataset

Pick Awesome Color Palette for Your App

Educational Resource

Principles of Great UI Design System

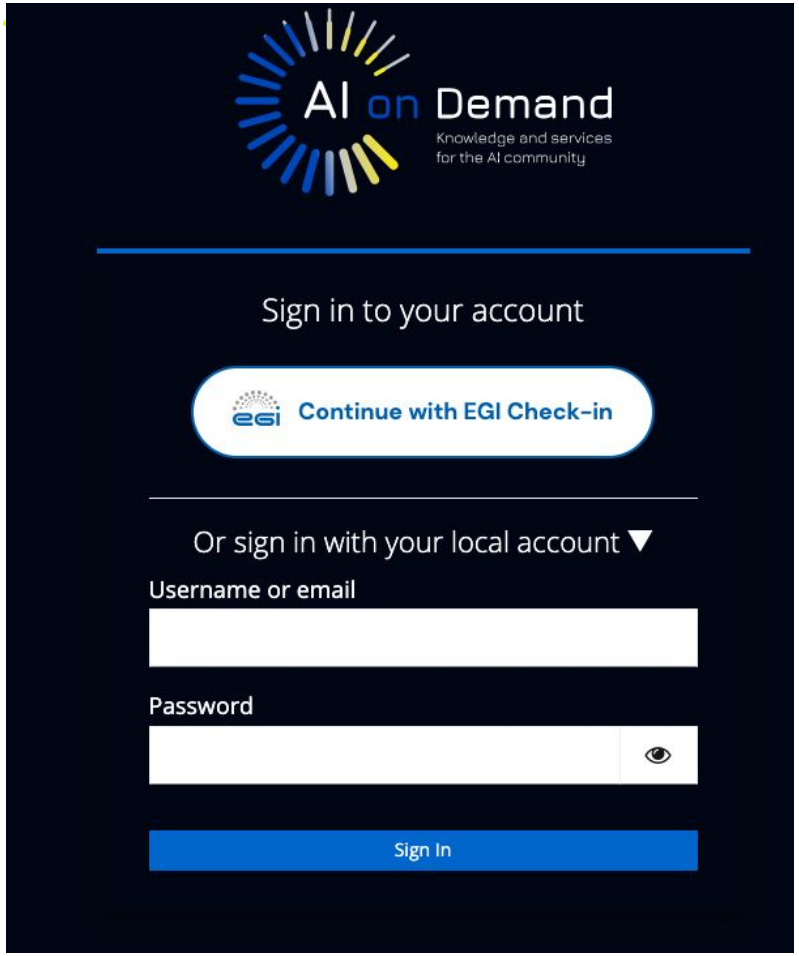
Dataset News

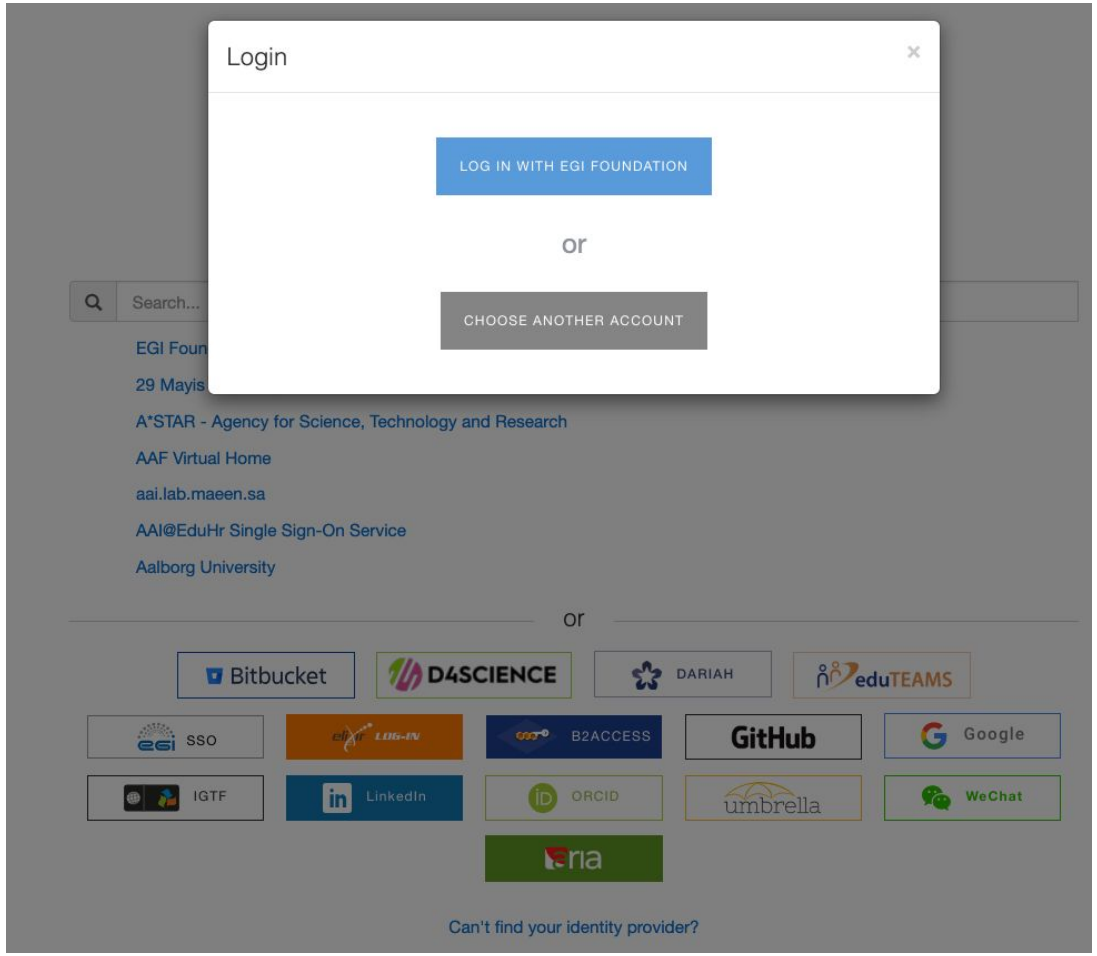
Principles of Great UI Design System

AI Model

Educational Resource

Authentication: single login for all services





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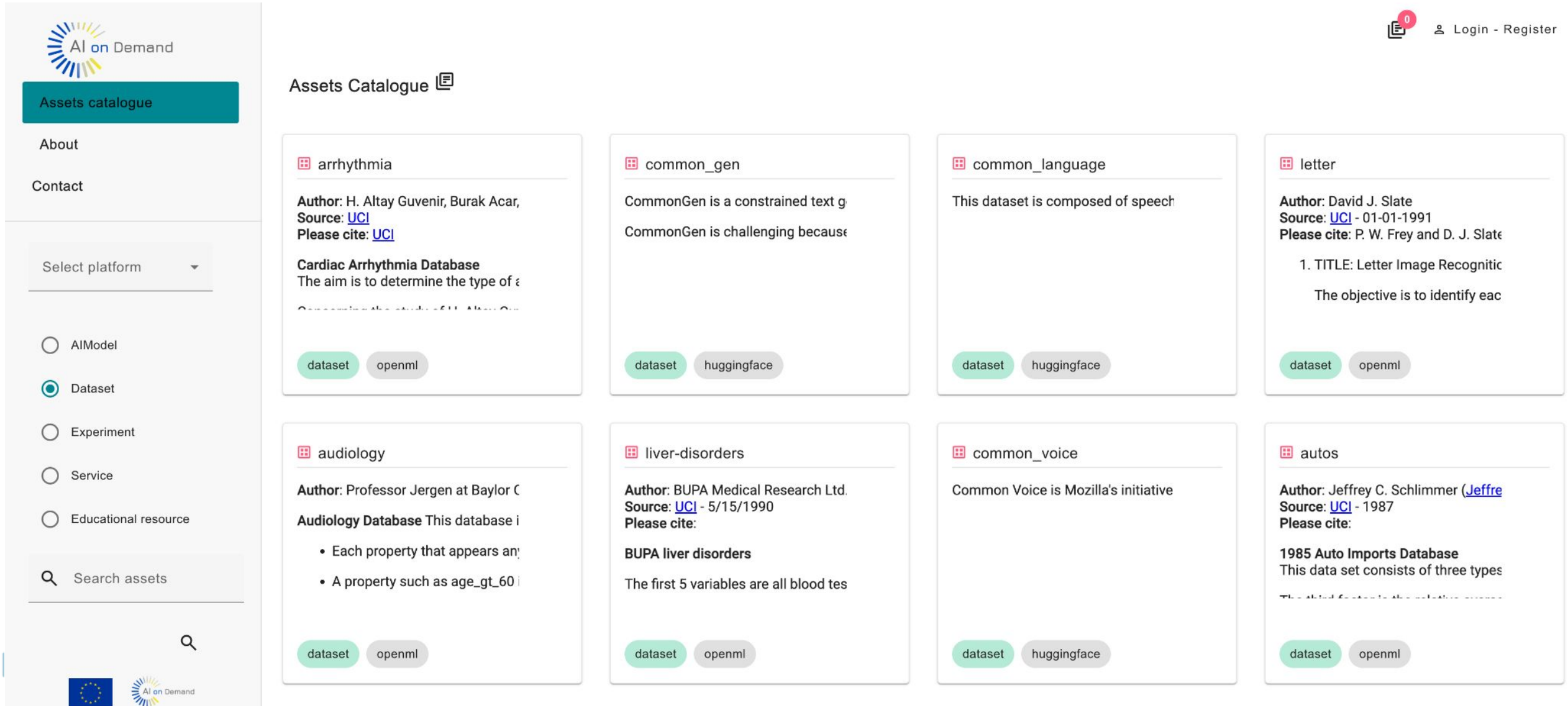
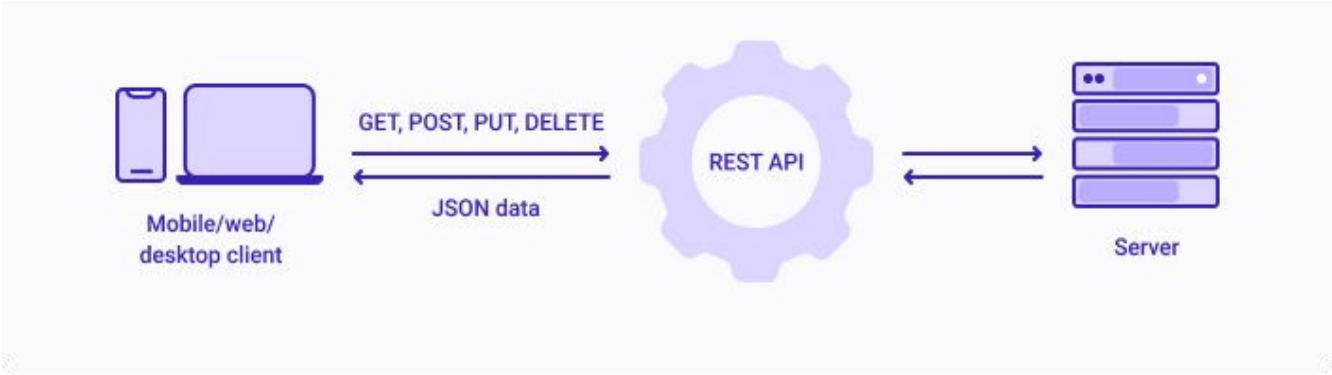
Interfaces: Catalogue search

https://mylibrary.aiod.eu



Interfaces: Programming Interface (API)

Everything you can do via the website, you can do via code (and much more)




```
import aiod

aiod.datasets.get_list()

aiod.publications.search(search_query="Robotics")
```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Python API

https://aiondemand.github.io/aiondemand/

Installation

The `aiondemand` package is on PyPI:

```
$ pip install aiondemand
```


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Python API

https://aiondemand.github.io/aiondemand/

Usage

You can directly access endpoints through the Python API, for example to browse datasets:

```
import aiod

aiod.datasets.get_list()
```

And results will be returned as a Pandas dataframe (though the `data_format` may be used to get JSON instead):

```
      platform platform_resource_identifier                    name       date_published                                  
0  huggingface       acronym_identification  acronym_identification  2022-03-02T23:29:22  https://huggingface.co/
...
9  huggingface             allegro_reviews        allegro_reviews  2022-03-02T23:29:22    https://huggingface.c

[10 rows x 30 columns]
```

Python API

https://aiondemand.github.io/aiondemand/

You can even query the elastic search endpoints:

```
aiod.publications.search(search_query="Robotics")
```

```
      platform platform_resource_identifier
0  robotics4eu                         1803  Responsible Robotics &amp;amp; non-tech ba

[1 rows x 36 columns]
```


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Python API

https://aiondemand.github.io/aiondemand/

Async methods (e.g. to build your own web services on top of AIoD)

```
In [7]: data = await aiod.datasets.get_list_async(offset=300, limit=5, batch_size=3)
        data[["platform", "name", "identifier", "is_accessible_for_free"]]
```

Out[7]:

	platform	name	identifier	is_accessible_for_free
0	openml	rosowky	301	True
1	openml	garrat	302	True
2	openml	doherty	303	True
3	openml	chang	304	True
4	openml	qsabr2	305	True

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Python API

https://aiondemand.github.io/aiondemand/

Get started now
-> Read the docs :)


```
get_asset_from_platform(*, platform,
platform_identifier, version=None,
data_format='pandas')
```

Retrieve metadata for a specific datasets identified by the external platform identifier.

Parameters:

Name	Type	Description	Default
`platform`	`str`	The platform where the datasets asset is retrieved from.	*required*
`platform_identifier`	`str`	The identifier under which the datasets is known by the platform.	*required*
`version`	`str | None`	The version of the endpoint (default is None).	`None`
`data_format`	`Literal['pandas', 'json']`	The desired format for the response (default is "pandas"). For "json" formats, the returned type is a json decoded type, in this case a dict.	`'pandas'`

Returns:

Type	Description
`Series | dict`	The retrieved metadata for the specified datasets.

REST API

https://api.aiod.eu/

You can also reach the API directly via REST

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Example: AI Ecosystem map

https://eu-ai-ecosystem.tnods.nl

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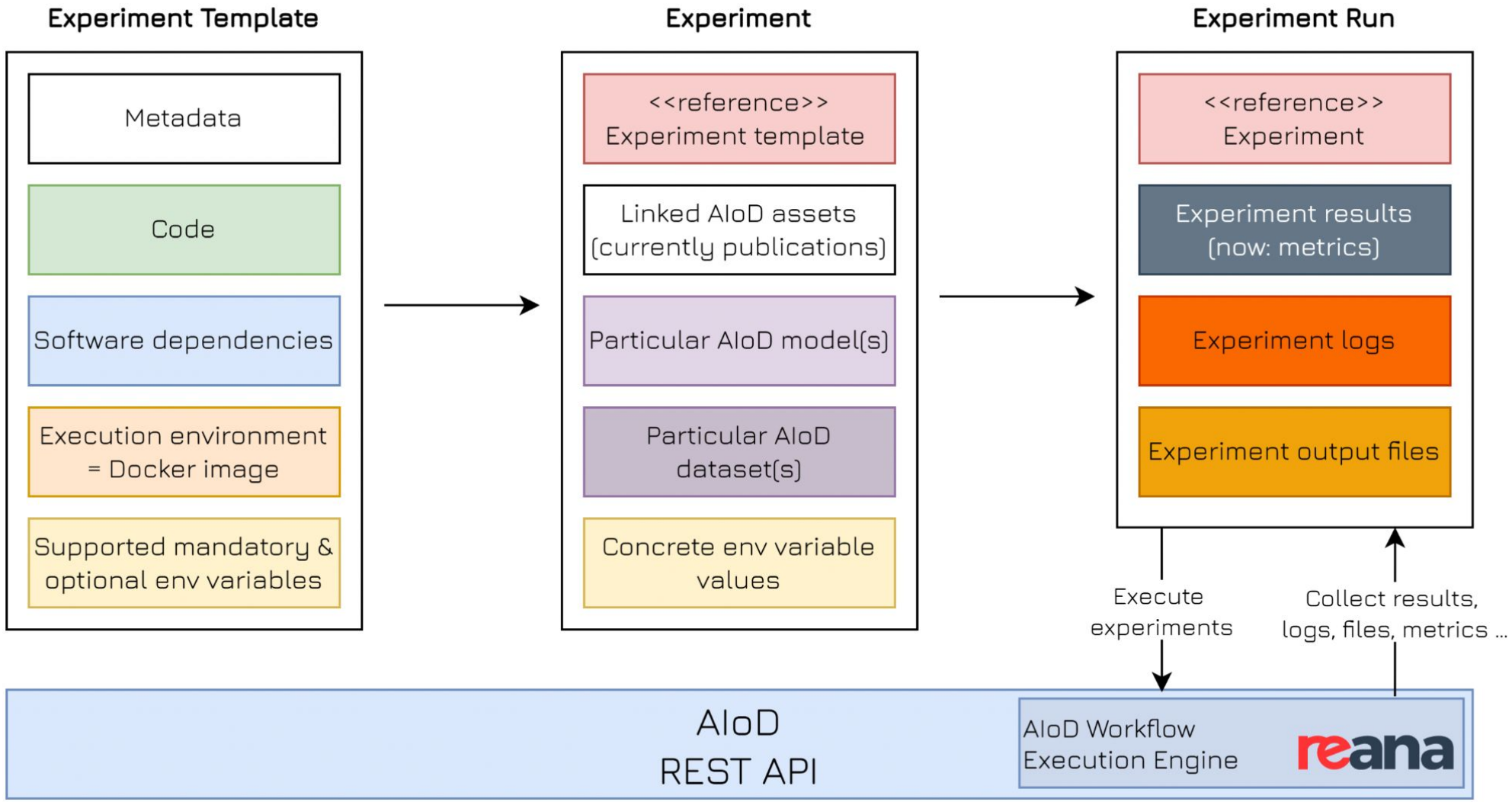
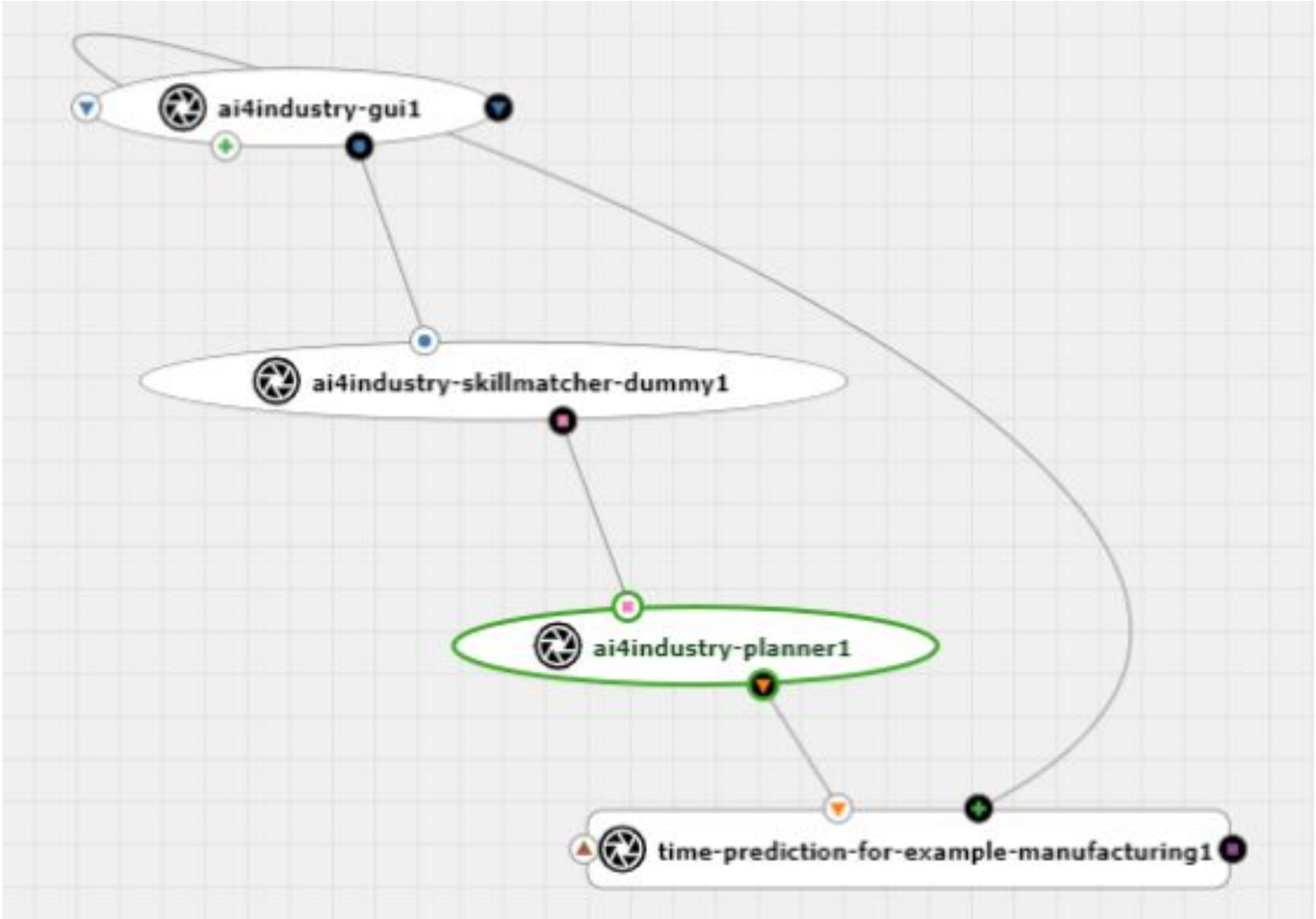
RAIL: Easily run AI experiments

https://rail.aiod.eu



AI Builder: no-code interface to build AI workflows

https://ai-builder.aiod.eu



Sharing your own AI resources and services

- **Upload to any of the connected platforms** (OpenML, HuggingFace, Zenodo,...)
  - AIoD will find them and index them
- **Upload via the AIoD website** (https://www.ai4europe.eu/contribute)
- **Upload via the API** (Python or REST)
- **Integrate your own repositories** (if you have many datasets, need access control)
- **Implement your own services on top of the API** (for more complex interfaces)

Need help? Simply reach out :)

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Knowledge and services
for the AI community

Thank you!

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The AI-on-Demand Platform

A community-driven platform empowering
AI Research & Innovation

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