

# **The AloD platform**

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# **The Al4Europe Project**

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www.aiod.eu

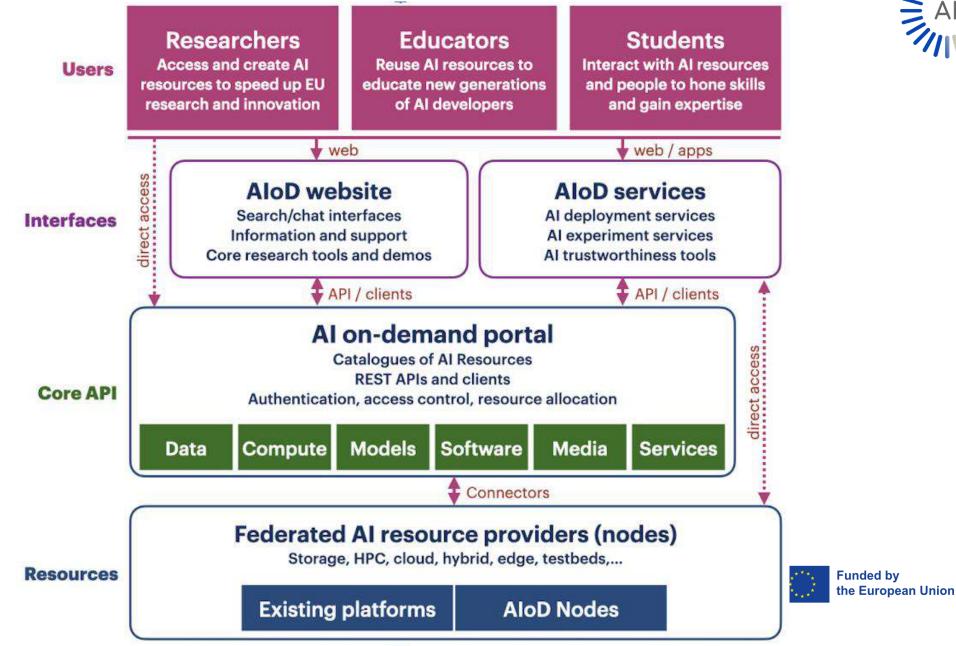
A community-driven platform empowering AI Research & Innovation 3111/1/ assets in one place Al on Demand AloD's MIL. Al on Demand 3 pillars 8 Common One sign-in for infrastructure of total access machines



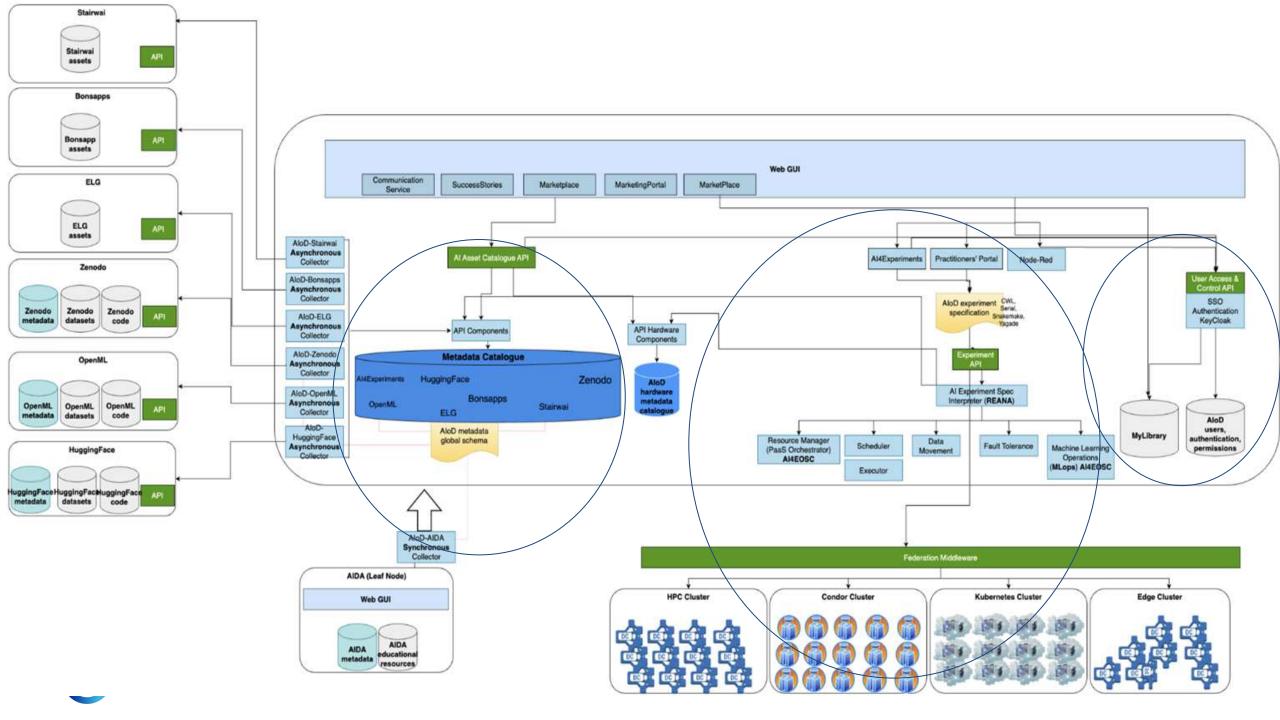
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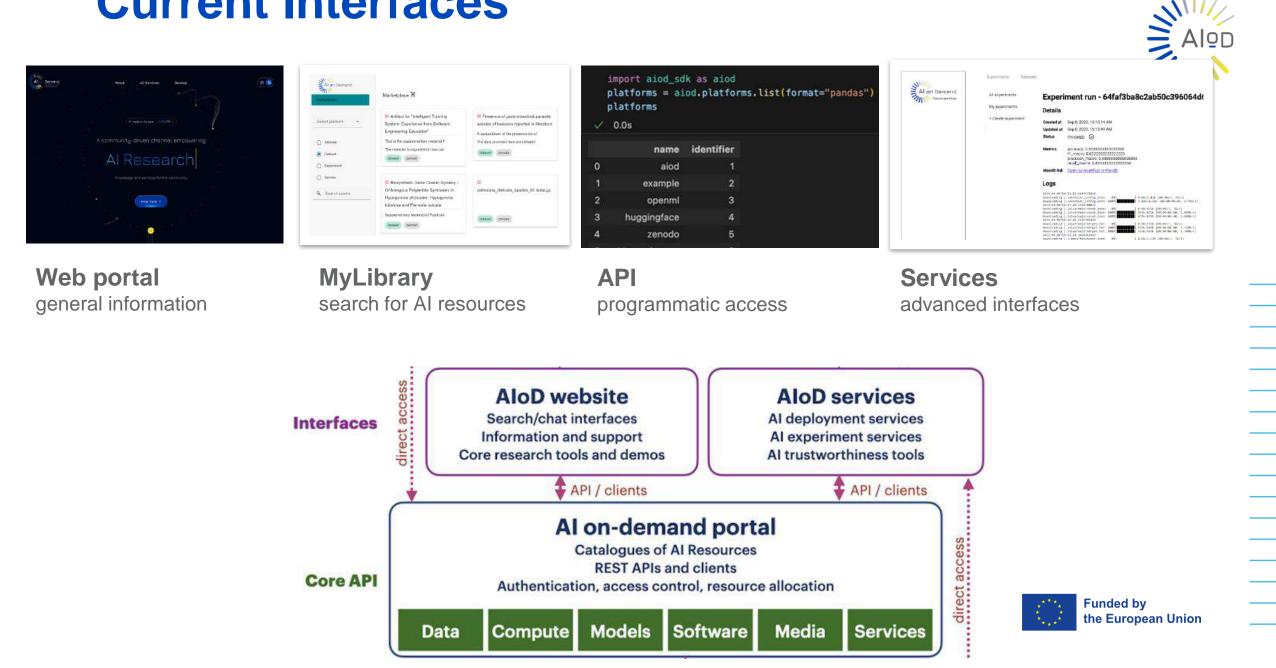
## **The AloD Architecture**







## **Current Interfaces**



## **A decentralised AloD platform**



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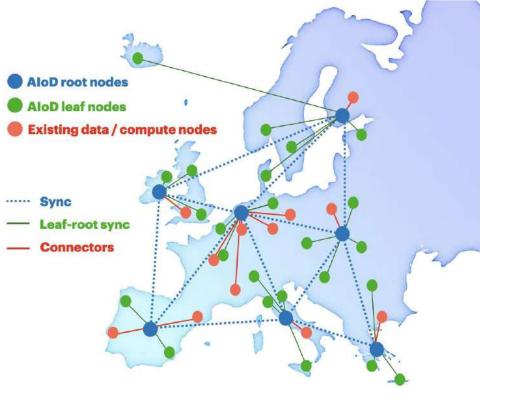
Distributed architecture:

#### • (Root) nodes

- run core AloD services (e.g. Al resource catalogue)
- run connectors to existing data and compute infrastructure
- Leaf nodes
  - run thematic services built on top of the core ones (e.g. portal, experimentation environments)
  - facilitates controlled integration of local services and resources.
- External resources

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 provide external resources (e.g. data and computing)





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## **The Identity and Access Management**

• Based on Keycloak

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- SSO, AuthN & AuthZ, Identity brokering
- Federated with EGI check-in
- EGI check-in: SSO to services using existing credentials
  - Academic (e.g. eduGAIN, ORCID)
  - Social media (e.g. Google, Facebook, LinkedIn)
  - Community-managed identities (e.g. RIs)

elcome to Keycloa	k account management	
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Manage your basic nformation Personal info	Control your password and account access Signing in	Track and manage your app permission to access your account
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Sign in to your account



Check-in

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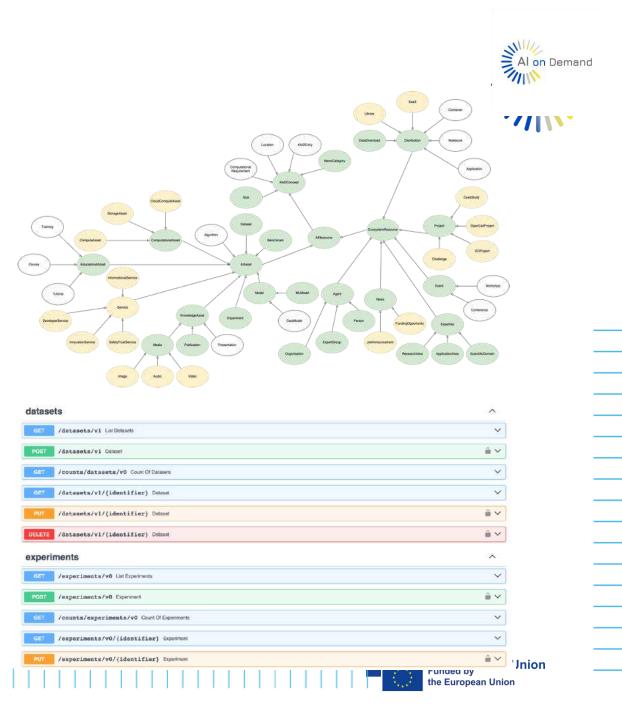
## The Metadata Catalogue

https://api.aiod.eu

• Software interface (API)

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- Supports listing, adding, updating, and retrieving Platforms, datasets, experiments, ML models, publications, services, projects, computational assets, news, events, educational resources, case studies, persons, teams,...
- Al resource (metadata) catalogue
  - 500K+ resources (mostly datasets), onboarded via the API
  - Connectors with OpenML, Zenodo, HuggingFace, AIDA, Bonsapps, StairwAI, Robotics4EU
  - ElasticSearch: searching over metadata catalogue across different platforms at once



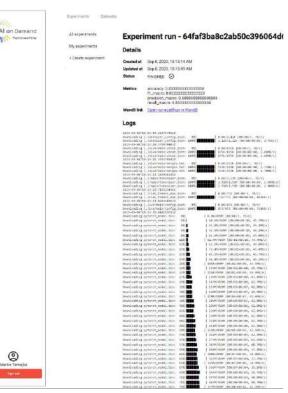
### RAIL https://rail.aiod.eu

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- A tool that allows AI practitioners to explore and use AI assets directly in AIoD in a lightweight and highly flexible way
  - A web application (currently also working 0 on API and SDK)
  - enables AI practitioners 0

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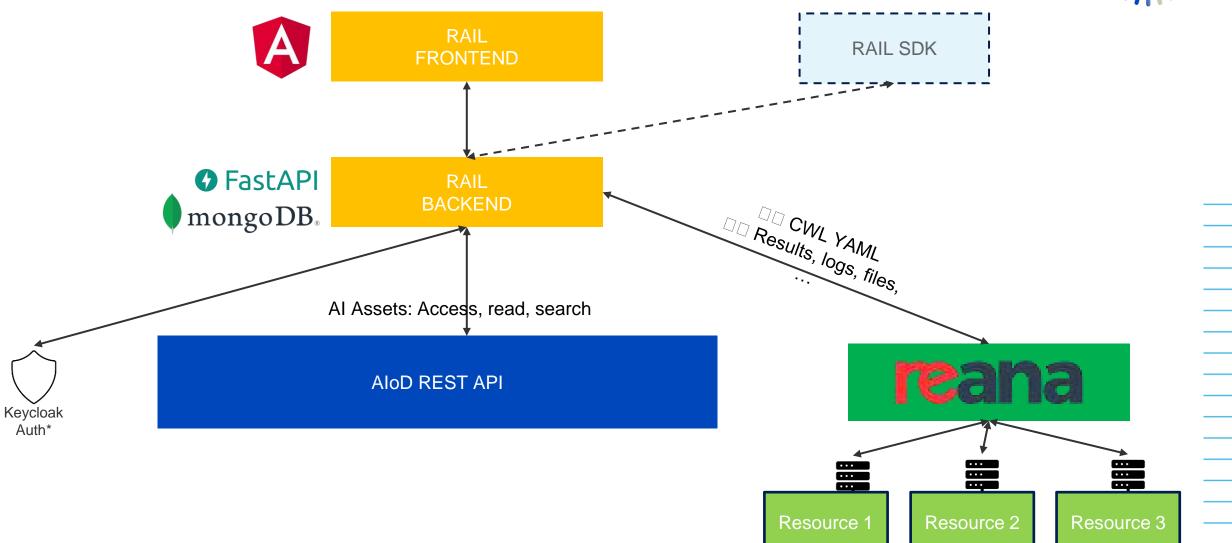
- work with AloD Al Assets (explore, 0 search, compare, ...)
- create experiments that are reproducible 0 and reusable
- execute directly in the AloD platform 0 supported by its infrastructure
- make use of AloD Al Assets 0



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RAIL





#### Al Builder https://ai-builder.aiod.eu



# ai4industry-gui1 0 ai4industry-skillmatcher-dummy1 ai4industry-planner1 time-prediction-for-example-manufacturing1 AI4LURUPL



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# How to Engage?

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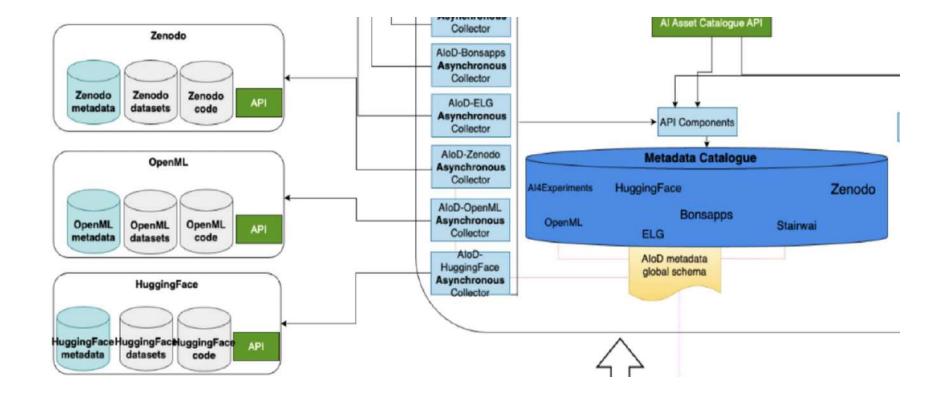
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**Connect AloD API to Services** 

Python SDK

- install via package manager Ο
- import and use it Ο

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- under development Ο
- Github: <u>aiod\_py\_sdk</u> Ο

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	<pre>import aiod_sd platforms = ai platforms 0.0s</pre>		us.list(format="pandas") Python
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3	huggingface	4	
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5	ai4experiments	6	

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Catalogu	e Swagger documentation of the AloD Metadata e. For the Changelog, refer to thub.com/aiondemand/AIOD-rest-api/releases.	1
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GET	<pre>/platforms/v1/{identifier} Platform</pre>	``
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Python

Python

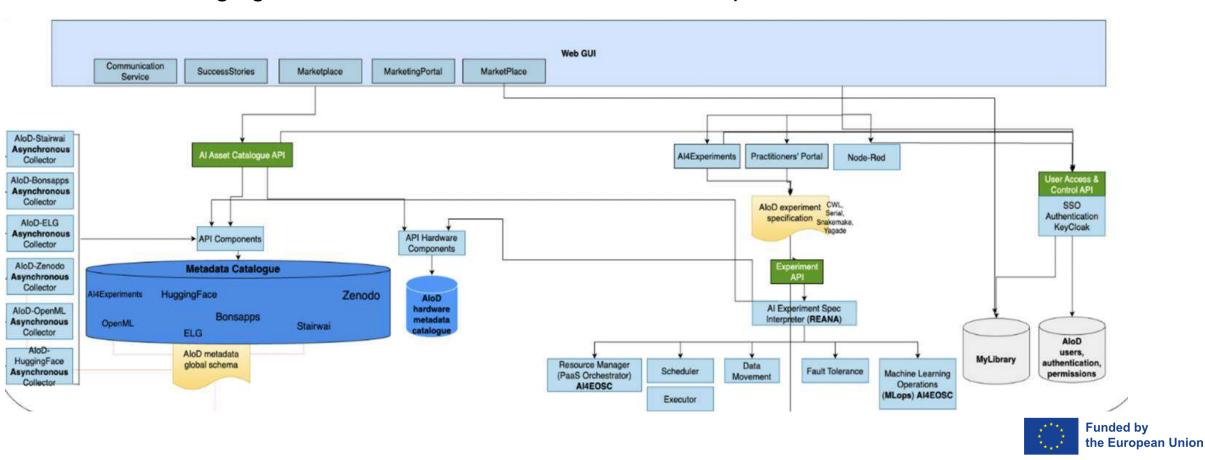
Python

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## **Sharing Services**



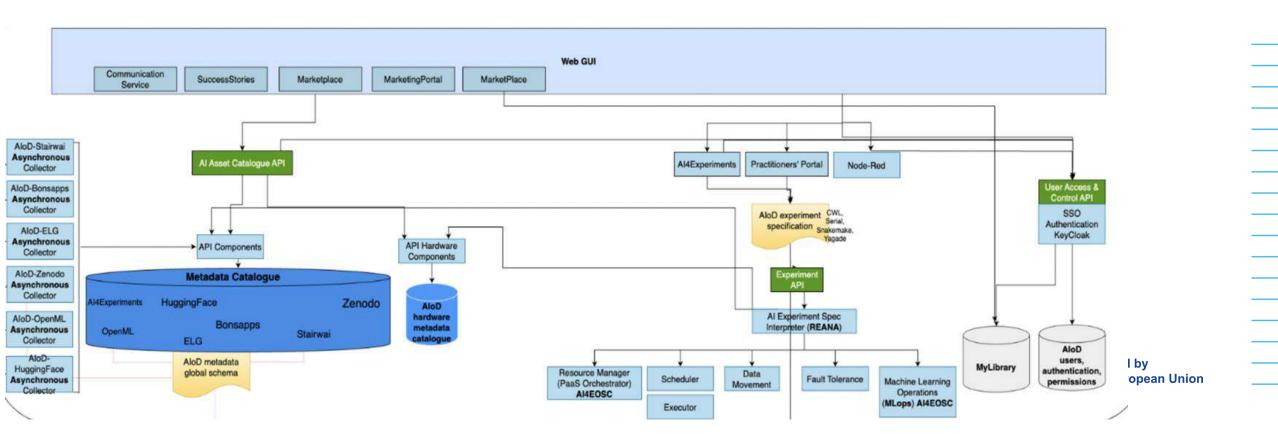
. Leveraging AIoD core services to create more complex services



# **Sharing Computing Resources**

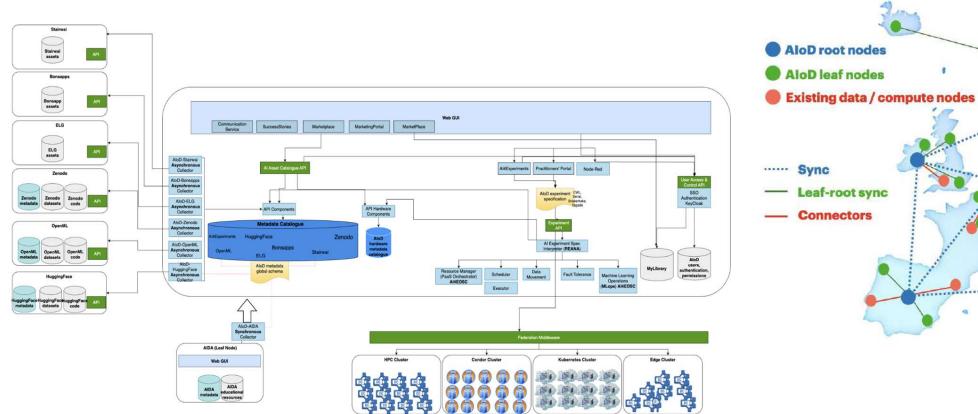


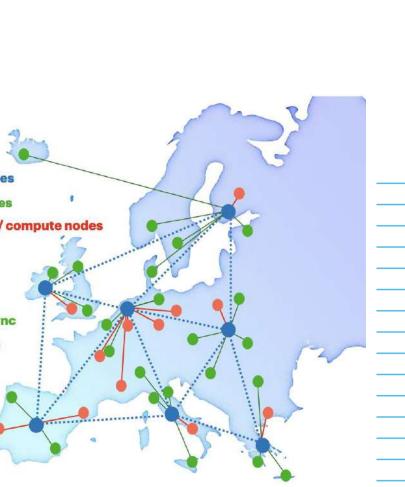
- Under development
  - Controlled shared of your computing resources



## Installing a local AloD

. Local Out-of-the-box bundle







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A community-driven platform empowering AI Research & Innovation





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# Thank you!

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