

How Linux Foundation is Changing the (Machine-Learning) World

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August 21, 2019



QLEFAI

LF AI mission

Build and support an open AI community, and drive open source innovation in the AI, ML and DL domains by enabling collaboration and the creation of new opportunities for all the members of the community

LFAl goals



Neutral Environment

Provide a **neutral environment** and an **open governance** that fosters **collaboration** and cross-pollination

Harmonization, Interoperability

Increase efforts to **harmonize** open source projects and **reduce fragmentation**; increase the **interoperability** among projects

Ethics and Fairness

Become the **home** of open source AI efforts in **ethics and fairness**, and an **advocate** for these principles

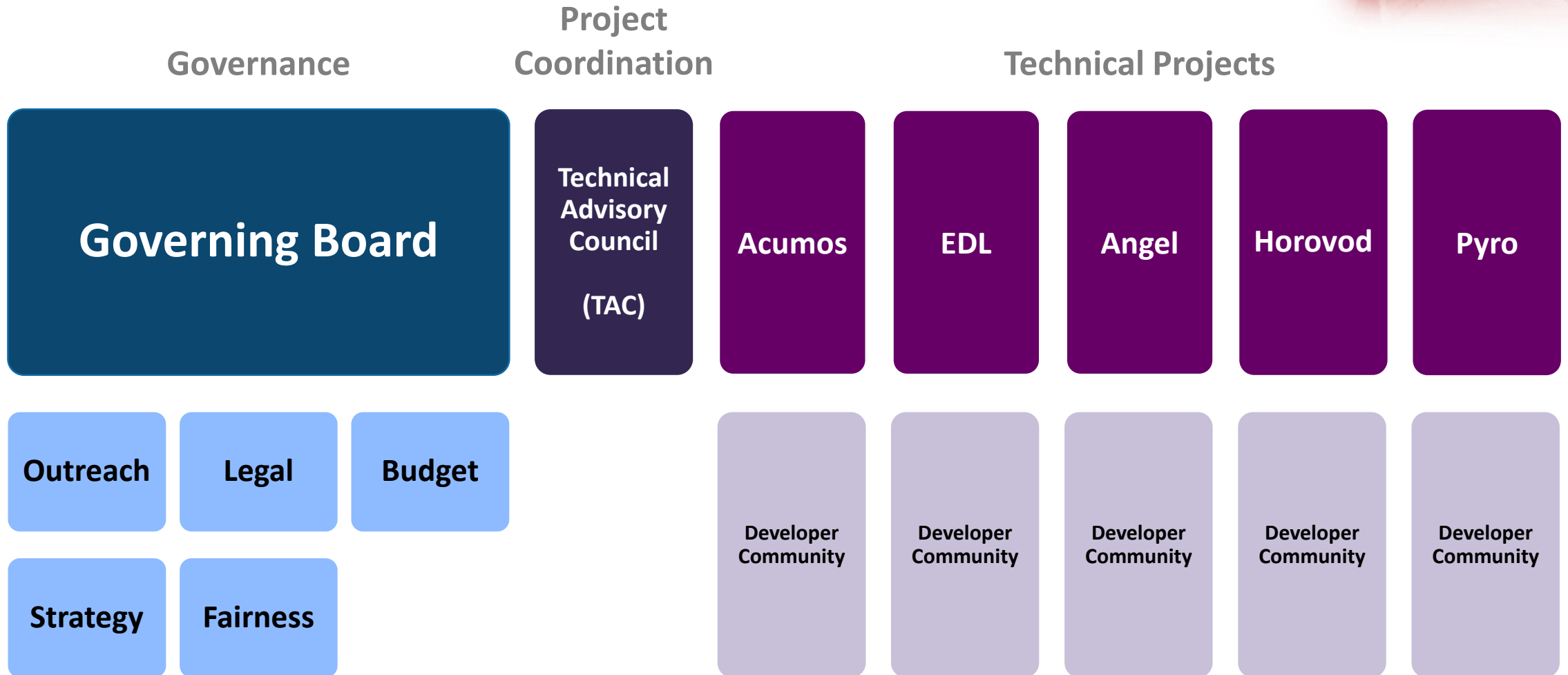
Data, Models Tools and Marketplace

Host open source AI models with supporting tools; publish best practices; offer a **marketplace** for **machine learning Models**

Funding and Awareness

Provide a **funding** model for **key projects**; increase awareness of LFAl projects

LF AI structure



Membership

Premier









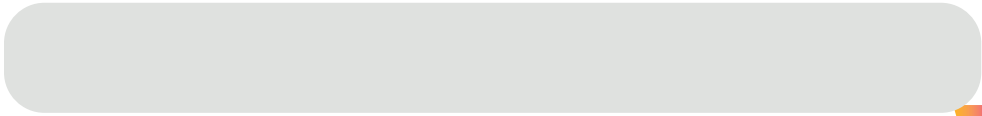
General



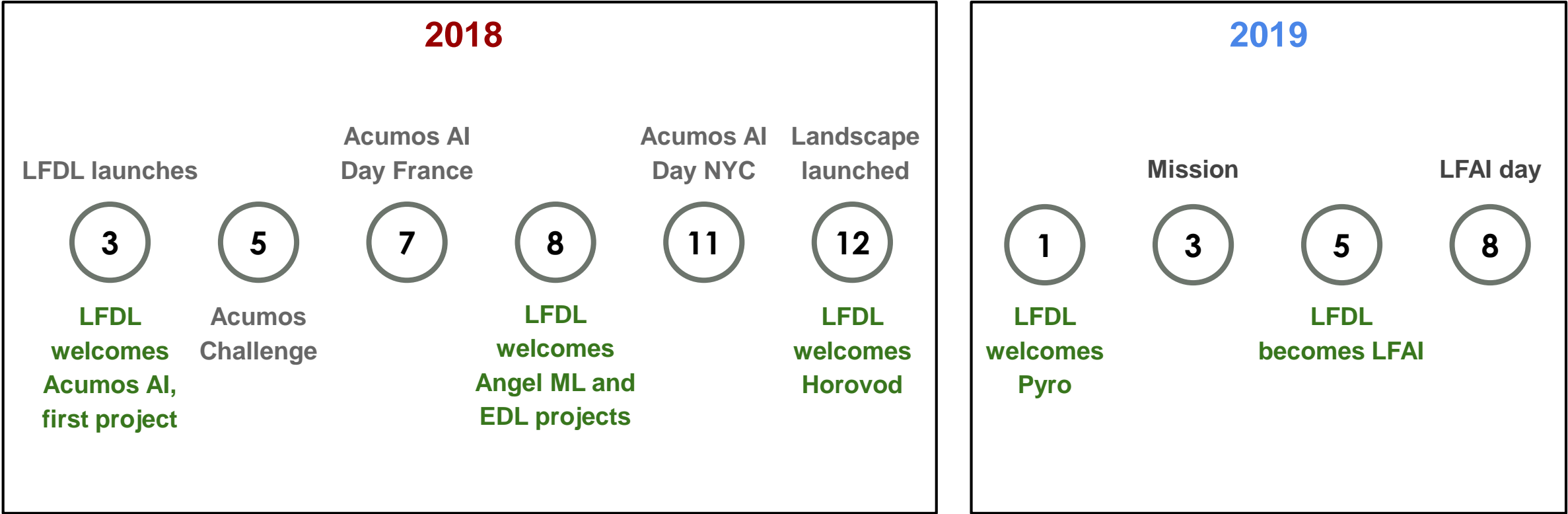




Associate



Major milestones



LFAl project maturities

Incubation

Graduation

Emeritus



TAC vote



TAC + GB votes



TAC + GB votes

LFAI PROJECTS

Projects



We would like to build a complete AI stack with LFAI projects that are tightly integrated

Acumos AI



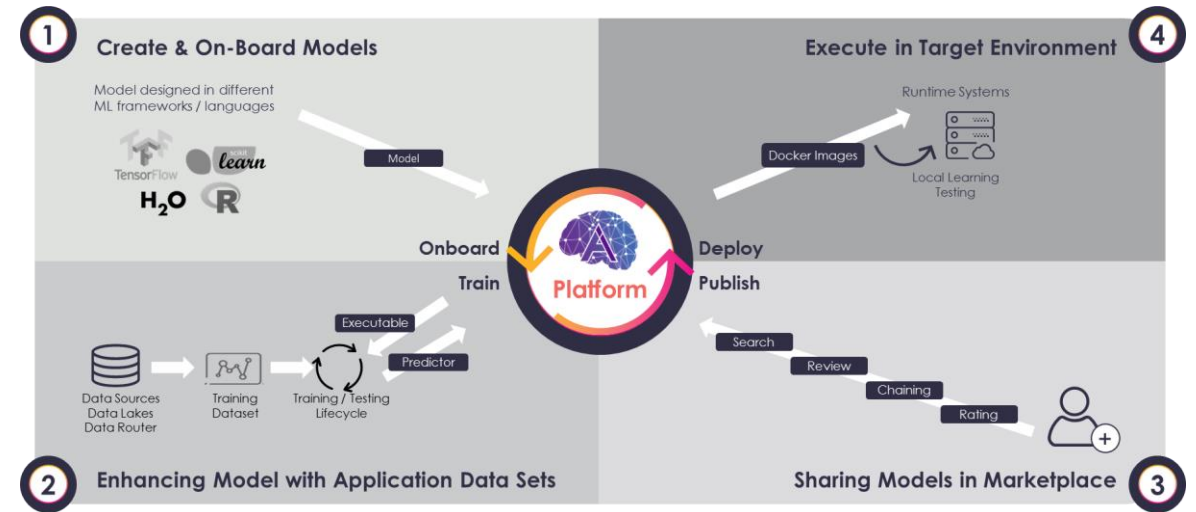
GitHub: <https://github.com/acumos>

7K+ commits, 89 contributors

License: Apache-2.0

Description:

Acumos AI is a distributed marketplace for ML models, that makes it easy to build, share, and deploy AI apps. Acumos standardizes the infrastructure stack and components required to run an out-of-the-box general AI environment. This frees data scientists and model trainers to focus on their core competencies and accelerates innovation



Angel



GitHub: <https://github.com/Angel-ML/angel>

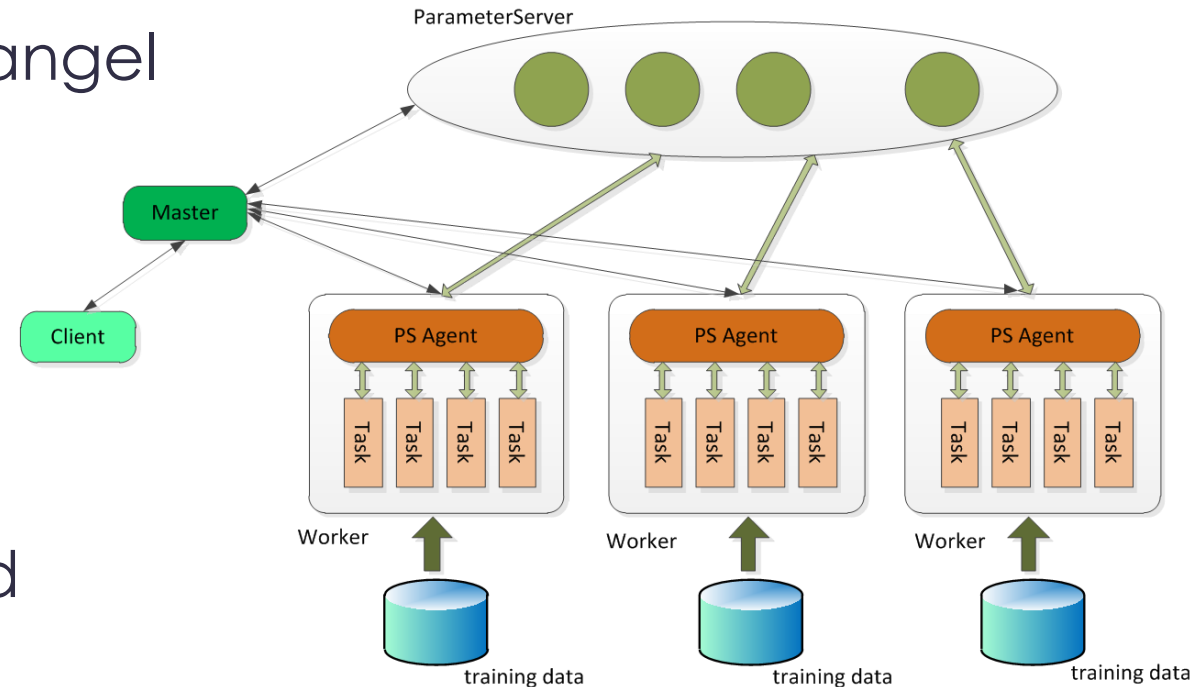
>2K commits, 57 contributors

4K+ stars

License: Apache-2.0

Description:

Angel is a high-performance distributed machine-learning platform based on Parameter Server, running on YARN and Apache Spark. It is tuned for performance with big data/model and has a wide range of applicability and stability, demonstrating increasing advantage in handling higher dimension model. Angel supports big and complex models with billions of parameters



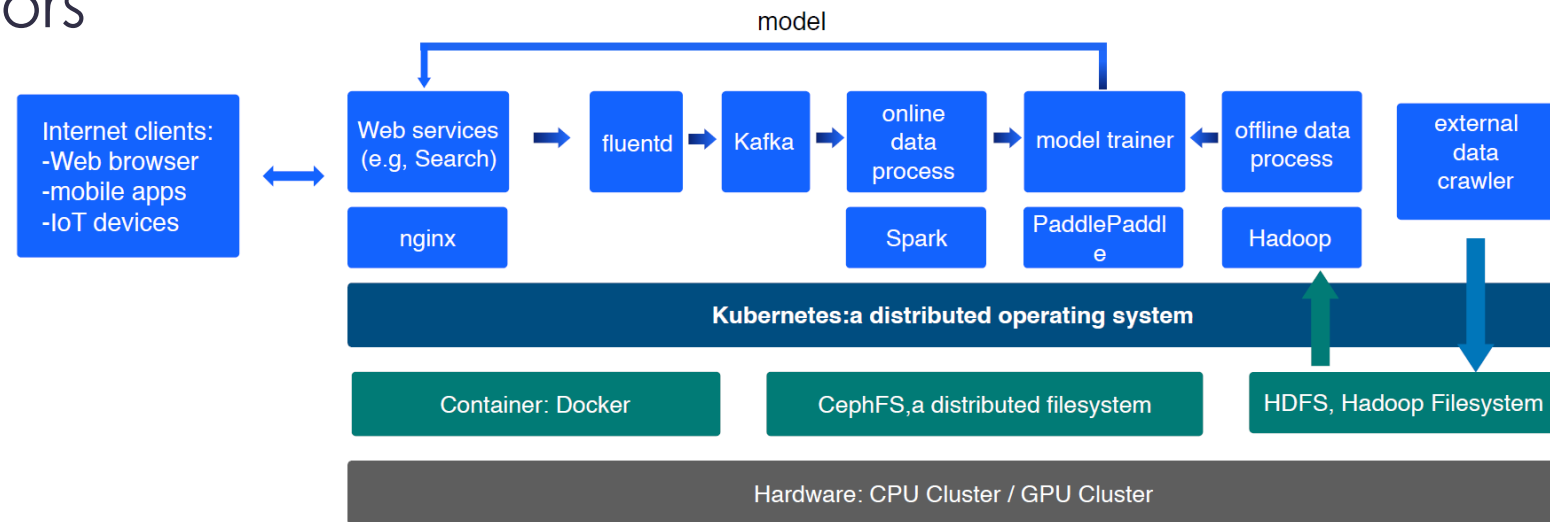
EDL – Elastic Deep Learning



GitHub: <https://github.com/paddlepaddle/edl>

~1,000 commits, 25 contributors

License: Apache-2.0



Description:

EDL is an Elastic Deep Learning framework designed to help Deep Learning Cloud Service providers to build cluster cloud services using different deep learning frameworks

Horovod

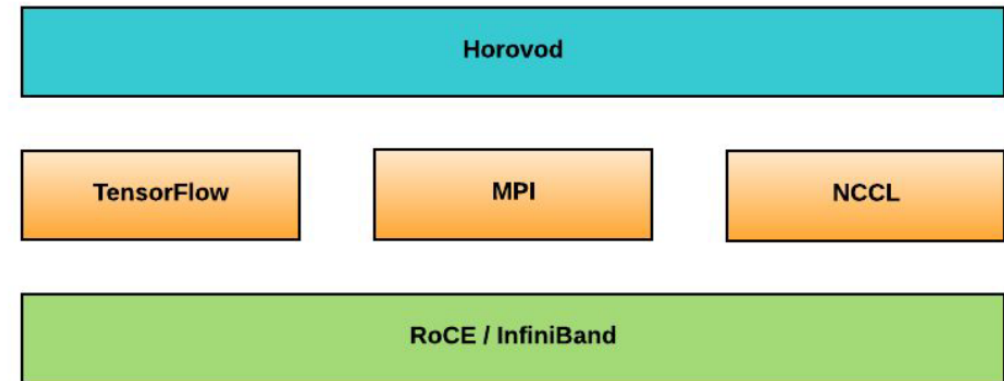


GitHub: <https://github.com/horovod/horovod>

>300 commits, 54 contributors

>7K stars

License: Apache-2.0



Description:

Horovod is a distributed training framework for TensorFlow, Keras, PyTorch, and MXNet. The goal of Horovod is to make distributed Deep Learning fast and easy to use

Pyro

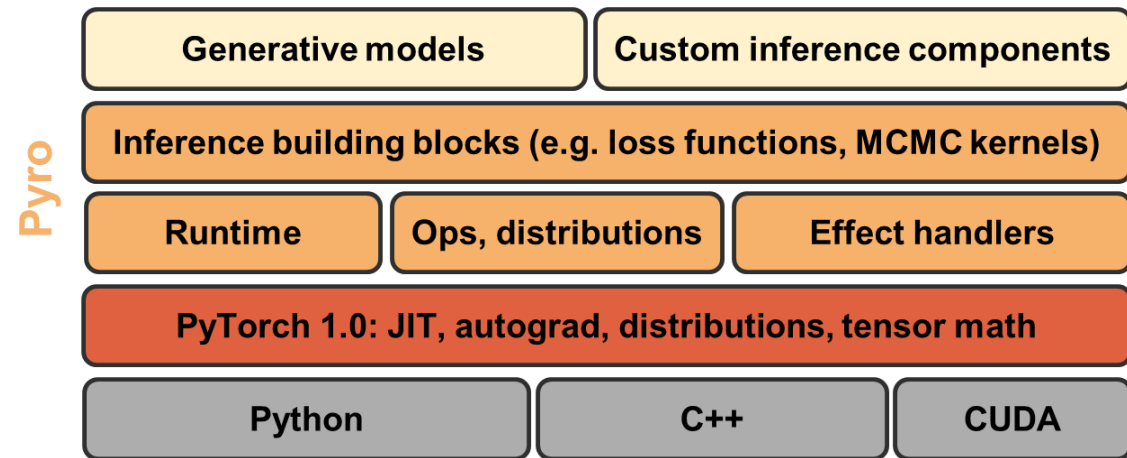


GitHub: <https://github.com/pyro-ppl/pyro>

>1,600 commits, 68 contributors

5,555 stars

License: Apache-2.0



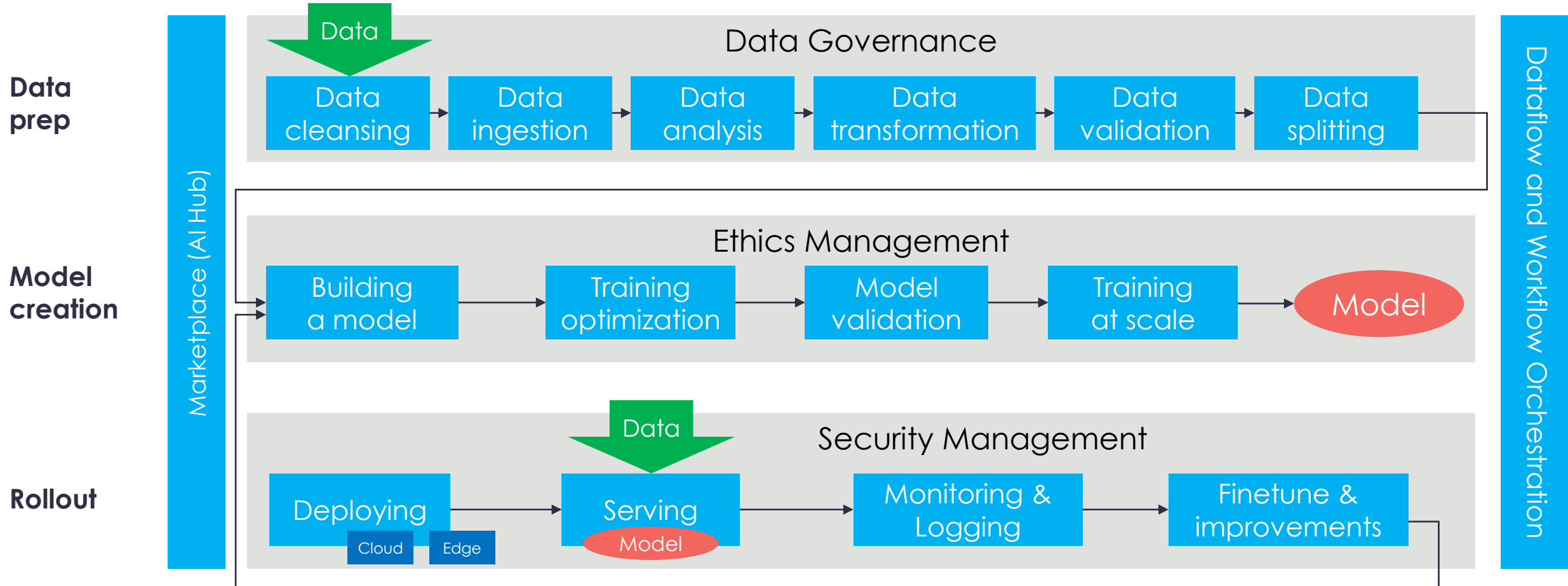
Description:

Pyro is a flexible, scalable deep probabilistic programming library built on PyTorch

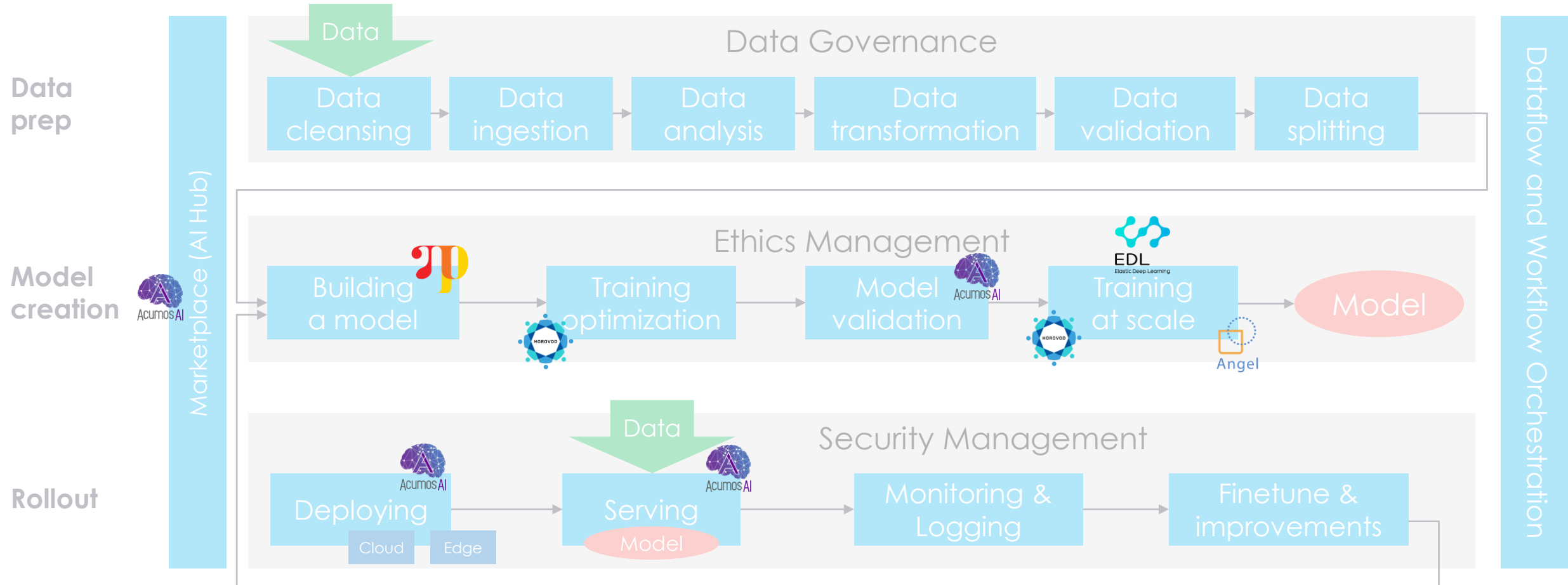
A photograph of the Aurora Borealis (Northern Lights) in a dark night sky. The aurora appears as a vibrant green, wavy band stretching across the upper half of the frame. Below the aurora, the dark silhouettes of a dense forest of evergreen trees are visible against the night sky. The foreground is dark and indistinct, possibly a snowy field or a body of water.

ML FLOW

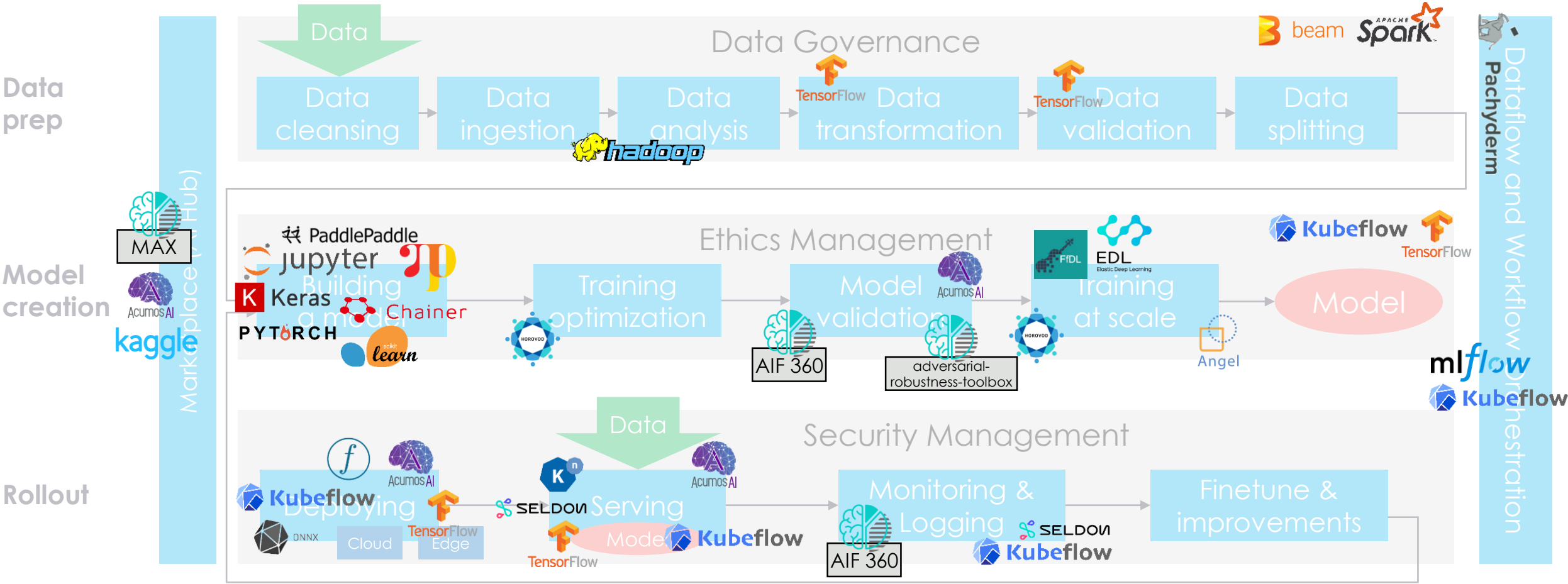
Machine Learning Stack



LFAI Machine Learning Stack



Open Source Machine Learning Stack





LF AI
Landscape

LF AI Landscape

163

Projects

963,000+

GitHub Stars

67

Organizations

Market cap of \$6.31T

11

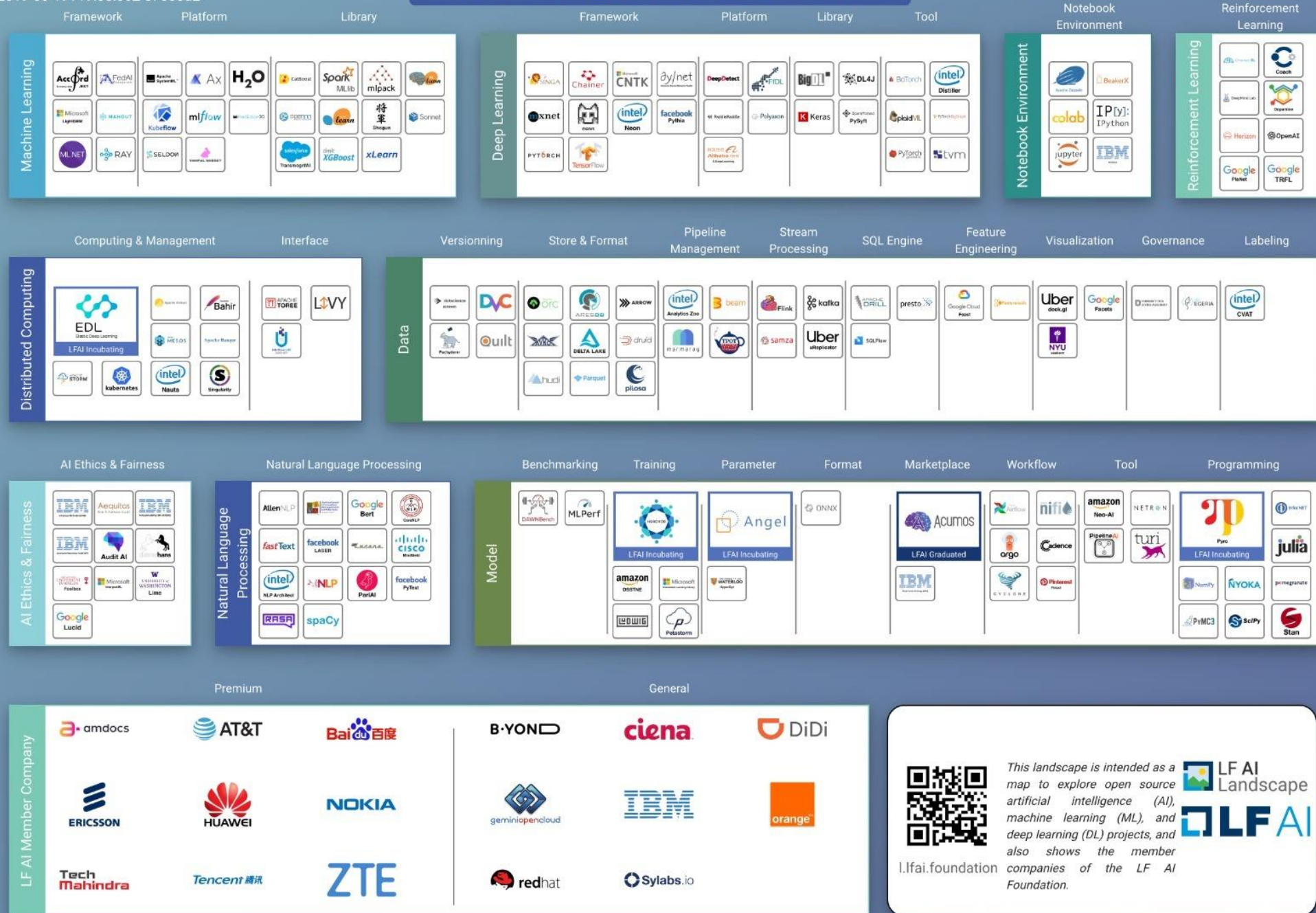
Universities

l.fdl.io

Linux Foundation AI Landscape
2019-08-19T19:08:06Z 07388d2

See the interactive landscape at l.fai.foundation

Greyed logos are not open source



Thanks You

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 <https://l.lfai.foundation>

 <https://wiki.lfai.foundation/>

 <https://github.com/lfai>

 <https://lfai.foundation>