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Enterprise

The Open-Source advantage: Exploring Machine Learning Through Thought Leadership

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What this talk is about

What is Machine Learning (ML)?

What is thought leadership and why is it significant in the ML ecosystem?

What are some popular open-source machine learning tools?

What are the benefits of open-source machine learning?

How thought leadership drives adoption and advancement ML and AI technologies.

Call to Action and Thank you

What is Machine Learning (ML)?

Machine Learning (ML) is a subfield of Artificial Intelligence (AI) that uses

algorithms trained on data sets to create models that enable machines to perform

tasks that would otherwise only be possible for humans, such as categorizing

images, analyzing data, or predicting price fluctuations. Today, machine learning is

one of the most common forms of Artificial Intelligence and often powers many of

the digital goods and services we use every day.

More information about Machine Learning

What is thought leadership? Why is it significant in the open-source ML ecosystem?

A thought leader is a person who is specialized in an area or

topic and whom others in a particular industry, community,

organization turn to for guidance. A thought leader leads others

in the thinking around a given topic.

They are **firm in their purpose and belief**. They stay **true to**

themselves. And they **love sharing their purpose**.

ML&AI Thought Leaders

When a person or organization positions themselves as an expert, they can **influence** discussions, **contribute** to research, **shape the future** of an industry and more.

Today we'll look at what that means in the ML and AI space.

Speaking of Thought Leadership….
DevOps in Data Science: What Works and What Doesn't
Chase Christensen & Stefano Fioravanzo
AI Day at Kubecon +CloudNativeCon NA 2022

What are some popular open-source machine learning tools?

Apache Airflow - open-source workflow management platform for data engineering pipelines.

Apache Spark - open-source unified analytics engine for large-scale data processing.

Apache Kafka – open-source distributed event store and stream-processing platform.

Apache Flink - open-source, unified stream-processing and batch-processing framework

Kubeflow - open-source platform for machine learning and MLOps on Kubernetes

Feast - open-source feature store

MLFlow – open-source platform to manage the ML lifecycle

Ray - open-source unified compute framework for scaling AI and Python workloads

Kserve - open-source standard Model Inference Platform on Kubernetes

Presto – open-source SQL Engine for Data Analytics

Trino - distributed open-source SQL query engine for big data analytics

Apache Superset- is an open-source modern data exploration and visualization platform.

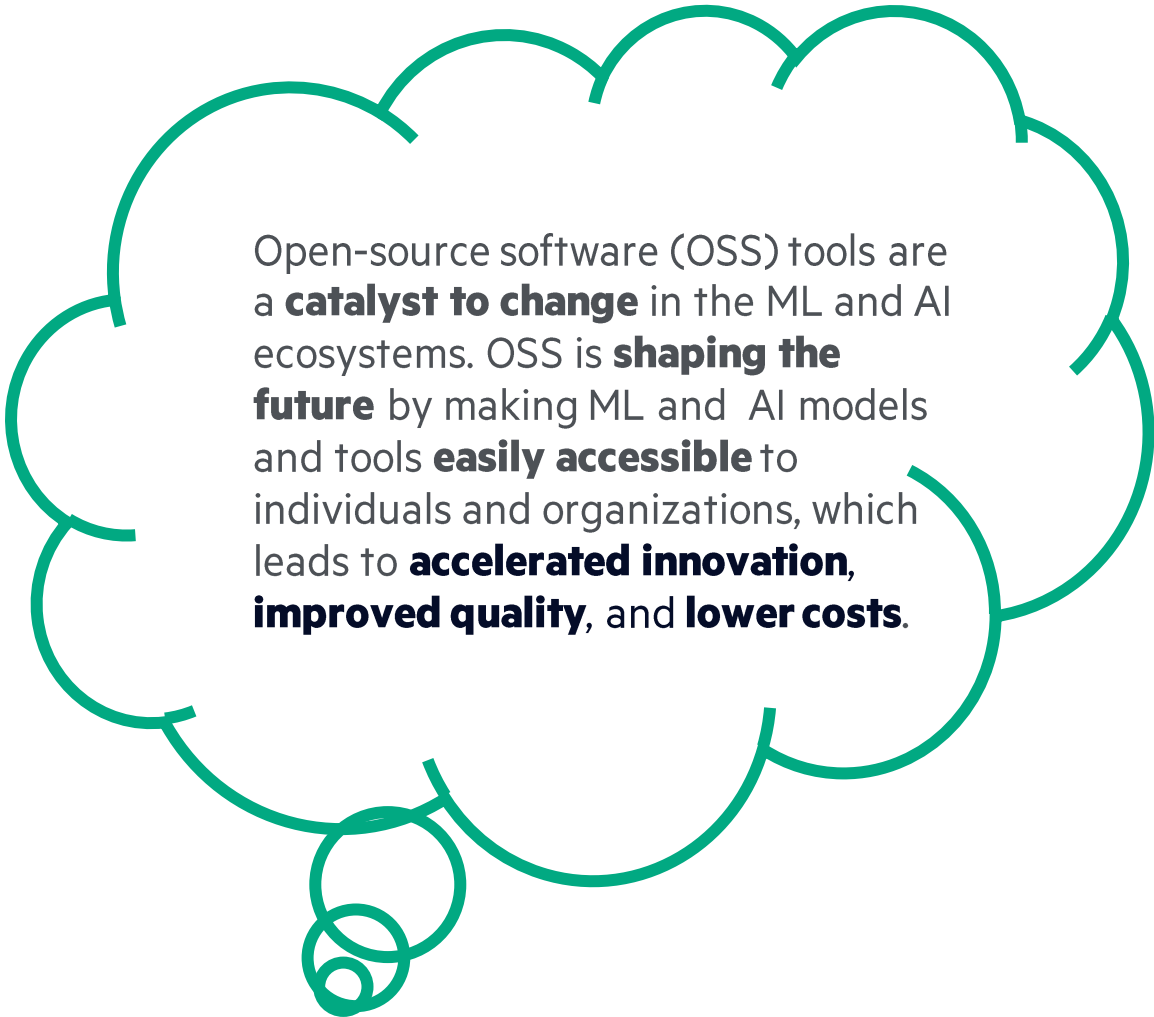# What are the benefits of open-source machine learning?

Benefits of Using Open-Source Tools

- Transparency
- Flexibility
- Agility
- Enhanced security
- Cost-efficiency
- Scalability
- Powering the digital transformation
- The open-source community
- Attracting talent
- Starting small

Open-source software (OSS) tools are a **catalyst to change** in the ML and AI ecosystems. OSS is **shaping the future** by making ML and AI models and tools **easily accessible** to individuals and organizations, which leads to **accelerated innovation**, **improved quality**, and **lower costs**.

How thought leadership drives adoption and advancement ML and AI technologies.

- **Collaboration and Innovation** – Open-source platforms allow developers worldwide to contribute, improve, and build upon existing code. This collaboration can lead to innovative solutions and advancements in ML and AI technology that might not occur within the confines of a single organization.

- **Accessibility and Diversity** - By making ML and AI technologies open source, they become more accessible to a diverse range of people, regardless of their location or resources. This diversity can drive innovation as different perspectives lead to unique solutions.

- **Education and Skill Development** - Open-source projects provide an opportunity for individuals to learn and enhance their skills. It's a great way to gain practical experience, which can help drive the adoption of ML and AI technologies as more people become proficient in these fields.

- **Standardization and Interoperability** - Open-source projects often become industry standards, as they allow for interoperability between different systems and technologies. This standardization can accelerate the adoption of ML and AI technologies as it becomes easier for businesses to integrate these technologies into their existing infrastructure.

- **Transparency and Trust** – Open-source projects are transparent because the code is publicly available for scrutiny. This transparency builds trust in ML and AI technologies, which is critical for their adoption, especially in sectors where the stakes are high, such as healthcare or autonomous vehicles.

Thank you, Questions, Call to Action

Ways to Participate and Contribute
without writing Code.

- Advocate
- Educate
- Translate
- Graphics Design
- Improve UX and Report Bugs
- Organize meetups
- Improve the knowledge base
- Recruit more people

Get Involved!

(Learn something; share something!
Become a thought leader and drive
adoption and shape the future of the
ML and AI Ecosystem)

THANK YOU!!
If you want to know more about
getting involved in open-source or
if you want to know more about **HPE Ezmeral Software:**

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