



Unleash the power of AI with Ori

SIMPLIFYING KUBERNETES FOR MACHINE LEARNING WORKLOADS

INTRODUCTION

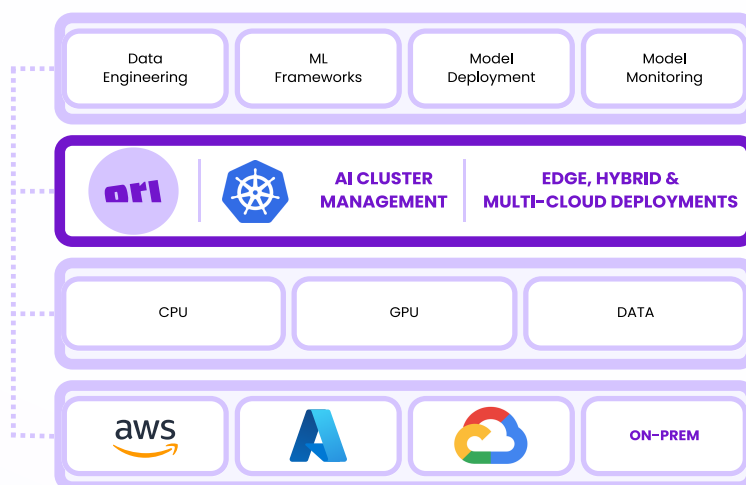
Companies working on AI have resorted to use Kubernetes for training and deploying their models. We identify the problems that Kubernetes solves and how it does it. We also identify some of the shortcomings of using Kubernetes for AI.

Challenges on Machine Learning

- **COMPLEX INFRASTRUCTURE** – Handling intricate infrastructure for ML workloads can be daunting and time-consuming.
- **REPRODUCIBILITY ISSUES** – Ensuring consistent results across different stages of ML pipelines is a complex task, often leading to inconsistencies.
- **RESOURCE UTILIZATION** – Efficiently using computational resources for ML tasks is a challenge, often leading to wastage and inefficiencies.
- **SCALING DIFFICULTIES** – Scaling ML workloads to meet demand can be a complex process, often requiring significant manual intervention.

How Kubernetes Helps Solve This

- **AUTOMATE ORCHESTRATION** – Kubernetes automates the deployment, scaling, and management of applications, reducing manual intervention and errors.
- **RESOURCE UTILIZATION** – It efficiently manages resources, ensuring optimal utilization and reducing wastage.
- **SCALABILITY** – Kubernetes enables easy scaling to meet demand, ensuring your infra can grow with your needs.
- **PORTABILITY** – It allows for seamless operation across different environments, ensuring your models can run wherever they are needed.



Challenges that Remain with Kubernetes

- **AUTOMATE ORCHESTRATION** – Setting up Kubernetes can be difficult and requires a steep learning curve, often deterring less technical users.
- **NETWORKING** – Networking is not trivial. It is challenging to connect nodes and clusters.
- **SECURITY** – Ensuring robust security in Kubernetes can be challenging due to its complex architecture.
- **SCHEDULING** – Kubernetes does not natively support batch or gang scheduling.

Ori simplifies Kubernetes for your AI and ML workloads.

Train and deploy models on the edge, hybrid and multi-cloud.

About ORI INDUSTRIES

Ori Industries simplifies the complexity of managing enterprise applications at a global scale. Our products empower modern applications to run anywhere, enabling enterprises to define, deploy and securely manage cloud-native workloads across any public, private or on-premise cloud.



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