

Red Hat Consulting : MLOps Foundation

Operationalize AI/ML models with Red Hat Consulting

“We’ve worked with containers for about four years. We wanted the benefits of a comprehensive Kubernetes platform—agility, resiliency, consistency, and portability—with the innovation and security of open source. “As one of the first companies to invest in the Kubernetes container ecosystem, Red Hat was the best vendor to help us develop, deploy, and run our AI workloads in containers.”

—
Ozan Orcunus
Senior Cloud Expert, Turkcell

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The industry continues to see a rising interest in artificial intelligence and machine learning (AI/ML) and with this, comes challenges of producing data science experiments and ad hoc training processes, making it difficult to keep models up-to-date. Data scientists are unequipped to build production ready model services while developers struggle to understand complexities of data science processes and businesses lack trust in model performance due to lack of transparency in models and their associated metrics.

Many organizations look for an AI/ML “path to production” to make sense of a complex web of tools and processes required to make models operational. However, in some scenarios, certain aspects, such as consistent model life cycles or toolchains, are overlooked. While this might work for a single data science team, larger organizations will find it difficult to scale the approach across multiple teams with different requirements and toolsets.

Because of the growing number of enterprise customers seeking to improve their data science capabilities and ways of working, Red Hat® Services data science and edge practices created Red Hat Consulting: MLOps Foundation. This engagement is designed to help customers advance their ML strategies, create a production ready inference service with reusable patterns, and automate the full ML model life cycle using cloud-native tooling and architectures.

Bridge the gap with Red Hat Consulting: MLOps Foundation

What is Red Hat Consulting: MLOps Foundation?

For organizations who have trained a few ML models, Red Hat Consulting Services can help with next steps. MLOps Foundation engagement helps teams move out of the experimentation phase and onto creating a robust, production ready ML system using traceable and repeatable pipelines.

The engagement delivers 3 key capabilities to help customers to productionize their ML models:

- 1. Model to microservice:** Take an existing ML model prototype and deploy it as an API service endpoint and update the model training code to be production ready.
- 2. Continuous integration and continuous deployment (CI/CD) automation:** Introduce CI/CD automation and deploy best practices with cloud-native tooling to help train and release models in less time, more frequently, and with higher confidence. GitOps is used to ensure a consistent single source of truth for pipelines, configurations, and environments.
- 3. Observable metrics:** Create observability into model, application, and business metrics to support actionable decisions and continuous improvement.

Customer focused approach

To allow for the best outcomes with this solution, it is highly recommended that a sample model be identified prior to the start of the engagement. The customer and Red Hat team will work together and continue to iterate on the sample model during the engagement. Throughout the MLOps Foundation engagement, Red Hat’s subject experts will help the customer:

[Learn more](#) about how Turkcell worked with Red Hat Consulting and Red Hat OpenShift to establish a responsive, cost-effective foundation for developing and delivering innovative AI-powered services in less time.

- ▶ Deploy the model to a 3-tiered application environment (development, test, and production) with the ability to make changes using CI/CD and GitOps.
- ▶ Build a testing framework throughout the model training and promotion process.
- ▶ Consider how to generalize to multiple use cases and models.
- ▶ Use case specific custom metrics and monitoring capabilities.
- ▶ Integrate with existing enterprise toolings.
- ▶ Integrate with existing application and data science frameworks.
- ▶ Automate retraining capabilities.

MLOps Foundation engagement is available in different options and capabilities to help meet specific business needs and requirements. If you're seeking guidance on building a sample model, [Red Hat Consulting: Red Hat OpenShift AI Pilot](#) could be a good option for your organization.

Get started with Red Hat Services

Red Hat strives to help our customers to deliver not just their first ML model, but the foundation for all their ML systems. By creating a reusable pattern to train and deploy an ML model as a production ready solution, Red Hat seeks to help our customers deliver successful future ML projects.

Red Hat not only helps organizations with deploying production-ready AI/ML solutions, but can also help bridge application development and data science disciplines, navigate the complexities of building modern and innovative infrastructure and applications, and guide teams through migrating to an open, cloud-native, integrative foundation.

The Red Hat Services difference

Red Hat Services comprises Red Hat Consulting, Red Hat Training and Certification, and Red Hat Technical Account Management (TAM) and provides customers with comprehensive support and guidance for building modern cloud applications.

Consulting: With hands-on mentoring, Red Hat Consultants build skills and foster independence, while also streamlining processes, aligning teams, and ensuring systems and applications work together.

Training: Red Hat Training and Certifications help close skills gaps and hone teams' Red Hat product expertise by developing role-based, hands-on knowledge in emerging and foundational open source technologies.

Technical AManagers (TAMs): TAMs partners with organizations to resolve potential problems before they occur, minimizing disruption and alleviating time to focus on key business challenges.

Ready to get started with AI/ML services offered by Red Hat? Reach out to your Red Hat Account Team or [speak to a Red Hat Consultant](#).

About Red Hat

Red Hat helps customers standardize across environments, develop cloud-native applications, and integrate, automate, secure, and manage complex environments with [award-winning](#) support, training, and consulting services.



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