



Top 10 Questions About MLOps and ModelOps

Organizations are developing AI/ML models at an increasing rate to transform and reimagine their business. Initial AI projects typically focus on the use of machine learning models (ML) and are most often led by data science teams within a line of business. This has resulted in a variety of new tools to help data scientists with ML model creation, experimentation and rapid deployment – referred to as MLOps. As enterprises increase the use of AI for business decisioning, there is an increasing need for IT to provide enterprise-level governance and operations for models in production – referred to as ModelOps.

Because of the fast growth of AI, the introduction of new tools, concepts, and terminology, there remains confusion about the difference between MLOps and ModelOps.

1 What is MLOps

MLOps is a feature set of data science platforms that are designed to help data scientists within a line of business develop and refine machine learning models faster and more efficiently. It typically includes tools that help with data preparation, model tuning and experimentation, model testing, model training, and rapid deployment.

2 What is ModelOps

ModelOps is an enterprise-wide capability that ensures validation of and accountability for all models in production. This includes managing all IT, risk, compliance, and business requirements throughout the model's life cycle, as well as the health and operational efficiency of models once they are in production. ModelOps encompasses all models (not just ML) regardless of type of model, how developed, or where they run (on premises, cloud, edge).

3 What types of capabilities are common in MLOps tools?

MLOps tools are designed to accelerate model creation for the data scientist. They typically include capabilities like data analysis, feature engineering, model training, model experimentation, and model testing. Some proprietary data science platforms include rapid deployment and monitoring for models developed on that specific platform.

4 What type of models are handled by MLOps tools?

MLOps tools are designed for machine learning models only. There are an array of AI and analytic models that MLOps tools do not support. For example, rules-based models, graph models, models in traditional programming languages (e.g. C/C++), and black-box 3rd-party vendor models.

5 What types of capabilities are common in ModelOps solutions?

ModelOps solutions are designed to provide IT with comprehensive operations management and governance capabilities for all production models. This includes a real-time inventory of all production models, process automation to enforce business, compliance and risk requirements, and continuous operations to maintain performance and reliability of the model decisioning.

6 Is there overlap between MLOps and ModelOps?

Some of the MLOps tool vendors are including limited operational capabilities such as rapid deployment and monitoring in their products. However, these operational capabilities are specific to machine learning models and integrated with the data science platform, which is designed for use by a data scientist for their specific models. Effective model operations management is only achieved when it occurs at the enterprise-level and led by IT working with all stakeholders. Effective and compliant AI requires a separation of these two disciplines – model creation and model operations. The separation provides the checks and balances that are needed for secure production operations and effective governance of your models and AI initiatives, and lets the data scientist focus on the domain of model creation.

7 Does ModelOps diminish the investment that has already been made in MLOps tools?

Remember, MLOps tools are designed to address the needs of the data scientist and model development and refinement in the experimentation phase in the lab. ModelOps is about addressing the needs of the enterprise and managing the operations and governance of all models in production. If data science requires a specific MLOps capability for model creation and rapid deployment, then a good ModelOps solution will be able to integrate with your MLOps tools and let you further leverage that investment.

8 What is ModelOp Center?

ModelOp Center is an enterprise ModelOps platform that provides end-to-end governance and operations management of all production models, regardless of type of model, what tools were used to develop the model, or where the model is run (on premises, cloud, edge). It includes enterprise-level capabilities and automation for productionizing, monitoring, and governing each and every model throughout its entire life cycle.

9 What makes ModelOp Center different from other ModelOps solutions?

ModelOp Center has a powerful abstraction layer that ensures that any type of model can be governed and managed with ModelOp Center. Its library of pre-defined and easily customized automated processes, called model life cycles, allow you to quickly define the end-to-end management path for each and every model and enforce the business, risk and compliance requirements for successful model operations.

10 What if I have tools that overlap with the capabilities that ModelOp Center provides? Will I lose the investment I have made in those tools and solutions?

ModelOp Center can easily integrate with data science tools, IT systems, and business applications so you can retain and even extend your existing tools investment.