

# What is MLOps?

MLOps is a methodology that efficiently oversees the complete lifecycle of ML applications, including development, testing, deployment, and ongoing maintenance within a production environment.

MLOps leverages automation and rigorous monitoring to streamline the ML process, promoting collaboration among multidisciplinary teams. This approach accelerates time-to-production and ensures result reproducibility.



## Benefits of MLOps



01

### Efficiency:

MLOps empowers data teams to expedite the development of models, resulting in the creation of higher-quality ML models. It also accelerates the deployment and production phases of ML projects.



02

### Scalability:

MLOps efficiently manages multiple models, overseeing them for continuous integration, delivery, and deployment. It ensures the reproducibility of ML pipelines, fostering collaboration and expediting release cycles while minimizing conflicts with DevOps and IT.



03

### Risk Mitigation:

Machine learning models often undergo regulatory scrutiny and require ongoing drift checks. MLOps enhances transparency and facilitates a rapid response to such demands, ensuring better alignment with an organization's or industry's compliance standards.



## What Are the Components of MLOps?

MLOps' scope in machine learning projects is adaptable, varying based on specific project requirements. It can encompass the entire spectrum, from data pipeline to model production, or focus solely on model deployment. Most enterprises, however, apply MLOps principles to the following areas:

- Exploratory data analysis (EDA)
- Data prep and feature engineering
- Model training and tuning
- Model review and governance
- Model inference and serving
- Model monitoring
- Automated model retraining



## MLOps Market Share

- 90% of companies have already adopted or are in the process of incorporating MLOps into their operations.
- Projections indicate that the worldwide MLOps market is set to achieve a valuation of USD 16.2 billion by 2028.
- A significant 60% of those surveyed are leveraging MLOps to enhance the quality and dependability of their machine learning models.
- Approximately 50% of respondents employ MLOps to expedite the deployment of new machine learning models into production environments.
- For 70% of survey participants, MLOps is a top organizational priority.

