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When to use MLOps for IoT Edge

6 minutes

Here, we'll discuss how you can decide whether MLOps for IoT Edge is the right choice for your machine learning applications. We'll analyze the suitability based on the following criteria:

Collaborative considerations

MLOps enables data scientists and developers to collaborate using the same DevOps processes. Hence, most teams need MLOps to collaborate and increase the pace of model development and deployment. Even if a team is small (say comprising five developers), MLOps can help to foster good engineering practices and future saleability.

Frequency of model refresh

How frequently do you need to update models in production? If your data changes rapidly and your model needs frequent updates, you should consider MLOps because MLOps can automate the model retraining process.

IoT considerations

Are you using IoT Edge on multiple IoT devices where you need to deploy and refresh machine learning models on Edge devices? MLOps for IoT Edge is suited for this solution.

Scalability considerations

A build pipeline on Azure DevOps can be scaled for applications of any size. Hence, MLOps is suited for solutions that need to be scaled in the future.

Cost considerations

Azure DevOps is free for open-source projects and small projects with up to five users, but for larger teams, it needs a purchase plan depending on the number of users. Depending on the use

case, Compute is the most significant cost driver in this architecture. You should explore the cost considerations depending on the use case.

Governance data requirements

MLOps captures governance data for an end-to-end model build and deployment. This data can help for interpretability, regulatory compliance, and audits.

Degree of automation needed for your ML lifecycle

Various components of MLOps enable automation (for example, CI/CD). Collectively, MLOps can automate the end-to-end processes.

Next unit: Knowledge check

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