УДК 004.413.2

ADVANTAGES & DISADVANTAGES OF MICROSERVICE ARCHITECTURE FOR MACHINE LEARNING MODELS

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Introduction. Microservices is a modern architecture that divides a system into small, independent, autonomous services. It solves some problems in the traditional monolithic architecture. However, applying this architecture for machine learning problems introduce new challenges such as “A container Scheduling” [1].

Main Part. By Studying and analyzing relevant studies, we determine a list of advantages and disadvantage of using microservices architecture for machine learning problems.
Main detected advantages can by summarized by following:
Larger applications can remain mostly unaffected by the failure of a single module that improve fault tolerance [2], with added simplicity, developers can better understand the functionality of a service.
Smaller codebases and scope lead to quicker deployments, since the services are separate, it is possible to scale the most needed ones at the appropriate times, as opposed to the whole application that increase scalability. In addition, these advantages include faster performance, easier scalability, and easier code reuse.
Main detected disadvantages can be summarized by following:
Multiple databases and transaction management may be complex. Testing a microservices-based application can be cumbersome. Microservices are great for large companies but can be slower to implement and too complicated for small companies who need to create and iterate quickly [3], and don’t want to get bogged down in complex orchestration.

Conclusion. Microservices architecture has several advantages over traditional monolithic. Nevertheless, it is important to determine the pros and cons of microservices before using it for machine learning system**.**

References:

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