

**ANOMALY DETECTION IN CI/CD PIPELINES
(PERFORMANCE DEGRADATION DETECTION)**

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Abstract and keywords

In recent years, microservices have been more familiar with software developers because it is simple to code and get the job you need while comparing to monolith applications. As a result, CI/CD comes into play to ensure continuous off-app delivery when companies follow agile developments. This CI/CD environment consists of several phases, such as error code testing, integration testing etc. They do not have a simple way to perform performance testing and get the basic idea of the overall system throughput.

This research is focused on developing a microservices performance degradation detection system using machine learning and created a simple and straightforward mechanism. Based on the existing research author decided to try out supervised learning methods using XGBoost. The final solution was able to detect performance degradation. It helps DevOps and cloud engineers determine how they should deploy the system (whether increase the virtual machine's performance or decrease it) and adjust auto-scaling values based on the result predicted.

Keywords— CI/CD, Performance Degradation detection, microservice, metrics data, observability, cloud computing