AI plays a crucial role in streamlining continuous testing processes by reducing the need for manual intervention. With AI, Quality Assurance (QA) teams can initiate automated test cycles that run without human involvement. These tests identify defects and trigger corrective actions in real-time, drawing insights from historical data and past events.

**Automating QA Process:** While many QA activities are automated in continuous testing, there is often a manual step involved in approving deliverables to move from one quality gate to another based on test results. This manual intervention can lead to bottlenecks and disrupt the flow of work in the development pipeline.

An AI engine can take on the responsibility of evaluating the product at quality gates, making this process autonomous.

By analyzing the outcomes of automated tests, machine learning (ML) algorithms can make informed decisions to either allow the code to progress or hold it back. This results in a fully automated workflow.

**Robotic Process Automation (RPA):** AI can complement with RPA tools to enhance continuous testing processes and overall software quality.

- **Predict Root Causes:** Identifying the root cause of defects can be a time-consuming process that delays feature releases. ML algorithms, through pattern recognition and correlation analysis, can trace defects back to their root causes.
- **Test Data Generation:** RPA can assist in creating and managing test data by automating the process of generating test scenarios, populating databases, and ensuring that the test environment is set up correctly.
- **Text Execution:** AI can monitor these test executions in real-time, identifying issues or anomalies and triggering corrective actions without human intervention.
- **Feedback Loop:** RPA can facilitate the feedback loop by automating the collection of user feedback and integrating it into the testing process.
Automating QA Process with AI

Development
- Custom codebase
- GitHub
- Build
- Plugins
- Artifacts
- Version Control
- Cloud computing platform

Continuous Testing
- Functional Verification
- Performance Validation
- Quality & Compliance
- Quality Engineering

Robotic Process Automation
- Predict Root causes
- Test Data Generation
- Test Execution
- Feedback Loop

AI-based Quality Inspection

User Requirement