

AI AUTOMATION TESTING

- **DURATION OF TRAINING : 32 HRS.**
- **BATCH TYPE :WEEKDAYS/WEEKENDS**
- **MODE OF TRAINING :
CLASSROOM/ONLINE/CORPORATE
TRAINING**

AI Automation Testing – 32 Hours Syllabus

Module 1 : Introduction to AI in Testing (2 Hours)

- Overview of AI/ML in Software Testing
 - Benefits of AI-driven testing over traditional automation
 - Types of testing enhanced by AI (Regression, Visual, API, etc.)
 - Introduction to AI Testing Tools (Testim, Applitools, Mabl, etc.)
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Module 2 : Foundations of Test Automation (4 Hours)

- Brief on Selenium / Appium / Cypress
 - Test Automation Frameworks (Data-Driven, Keyword, Hybrid)
 - Handling dynamic elements and locators
 - Introduction to TestNG, Maven, Git for automation
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Module 3 : Machine Learning Basics for Testers (4 Hours)

- Understanding Supervised vs Unsupervised Learning
 - AI concepts applicable to testing:
 - Pattern Recognition
 - Predictive Modeling
 - Anomaly Detection
 - Intro to Python libraries: Scikit-learn, Pandas, Numpy
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Module 4 : AI-Powered Test Automation Tools (6 Hours)

- Testim.io / Katalon Smart Recorder – AI-based scriptless automation
 - Applitools – Visual AI Testing
 - Visual UI Regression
 - Integrations with Selenium, Cypress
 - Mabl / Functionize / TestSigma – self-healing & low-code automation tools
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Module 5 : Self-Healing & Intelligent Element Locators (4 Hours)

- How AI improves test element stability
 - Self-healing locators in tools like Testim, Katalon
 - Auto-updating locators using ML
 - Handling dynamic locators with AI logic
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Module 6 : Predictive Test Case Prioritization & Defect Analytics (4 Hours)

- Using AI to suggest high-risk areas for testing
- Predictive modeling for test case optimization
- Defect prediction models using ML algorithms
- Integrating defect tracking systems (JIRA) with AI insights

Module 7 : Visual & Voice-Based Testing (4 Hours)

- Visual AI for UI/UX regression
 - Image-based object detection (OCR)
 - Voice application testing using NLP & AI (e.g., Alexa, Google Assistant)
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Module 8: Building a Smart Automation Framework (4 Hours)

- Integrating AI tools with Selenium/Python/Cypress
 - Continuous Testing with CI/CD (Jenkins, GitHub Actions)
 - Smart reporting using AI dashboards
 - Real-time test analytics and decision making
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📌 Bonus Topics / Add-ons (Optional)

- ChatGPT in Testing: Writing test cases using AI prompts
 - Test Data Generation using AI/ML
 - RPA (Robotic Process Automation) basics
 - Overview of Autonomous Testing with Generative AI
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Tools Covered (Hands-On) :

- Testim, Applitools, Katalon, Mabl, Selenium, Cypress
 - Python (for AI scripting), Scikit-learn, Pandas
 - Jenkins, Git, JIRA
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