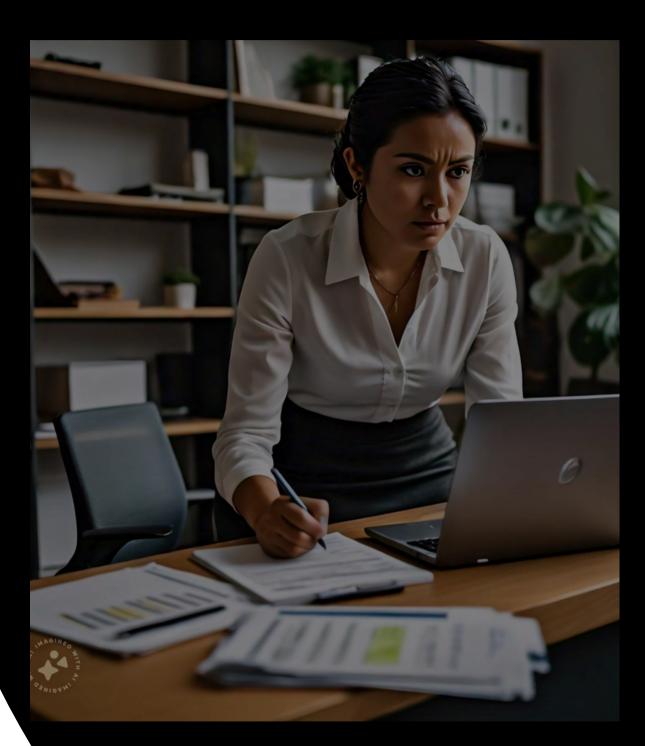


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#### **OUR MISSION:**



"Our mission is to empower learners worldwide through innovative technology, personalized learning experiences, and accessible educational resources. We strive to cultivate a community where every individual can achieve their full potential, regardless of their background or circumstances."

#### **OUR VALUES:**

"To pioneer the future of education by leveraging cutting-edge technology to make learning more engaging, effective, and inclusive. We envision a world where education transcends boundaries, creating opportunities for lifelong learning and fostering a society enriched by knowledge and creativity."

Week 1: API Testing Fundamentals Review

- Day 1-2: Introduction to APIs
  - Understanding RESTful and SOAP APIs.
  - Basic principles of API design and architecture.
- Day 3-4: Overview of API Testing
  - Types of API testing: functional, integration, performance, security.
  - Common tools for API testing.
- Day 5: Setting Up API Testing Environment
  - Installing and configuring API testing tools (Postman, SoapUI).

Week 2: Advanced API Testing Tools and Techniques

- Day 1-2: Postman Advanced Features
  - Creating and managing collections and environments.
  - Writing and running tests with Postman scripts.
- Day 3-4: SoapUI Advanced Features
  - Creating complex test suites and cases.
  - Using Groovy scripting for advanced validations.
- Day 5: Hands-on with Postman and SoapUI
  - Practical exercises on using advanced features.

Week 3: Automation and CI/CD Integration

- Day 1-2: API Test Automation with Postman
  - Writing automated tests with Newman.
  - o Integrating Postman with CI/CD pipelines (Jenkins, GitLab CI).
- Day 3-4: API Test Automation with SoapUI
  - Creating automated test scripts.
  - Integrating SoapUI with CI/CD pipelines.
- Day 5: Practical Automation Exercises
  - Hands-on automation projects with Postman and SoapUI.

#### Week 4: Performance and Load Testing

- Day 1-2: Introduction to Performance Testing
  - Concepts of performance, load, and stress testing.
  - o Tools for performance testing (JMeter, Gatling).
- Day 3-4: Load Testing with JMeter
  - Setting up JMeter for API load testing.
  - Creating and running load test scripts.
- Day 5: Analyzing Load Test Results
  - Understanding performance metrics.
  - o Hands-on: Load testing and result analysis with JMeter.

# Week 5: Security and Penetration Testing

- Day 1-2: Introduction to API Security Testing
  - Common security vulnerabilities in APIs (OWASP Top 10).
  - Tools for security testing (OWASP ZAP, Burp Suite).
- Day 3-4: Security Testing with OWASP ZAP
  - Setting up and configuring OWASP ZAP.
  - Performing security scans and analyzing results.
- Day 5: Practical Security Testing
  - Hands-on: Identifying and mitigating security vulnerabilities.

Week 6: Advanced Testing Strategies

- Day 1-2: Data-Driven Testing
  - Creating data-driven tests with parameterization.
  - o Tools and techniques for data-driven testing.
- Day 3-4: Mocking and Virtualization
  - Using mocking tools (WireMock, MockServer).
  - Creating mock APIs for testing.
- Day 5: Contract Testing
  - Introduction to contract testing (Pact).
  - Hands-on: Implementing contract tests.

Week 7: API Testing in Microservices and Cloud

- Day 1-2: Testing Microservices APIs
  - Challenges and strategies for testing microservices.
  - Tools for microservices testing (Karate, RestAssured).
- Day 3-4: API Testing in Cloud Environments
  - Strategies for testing APIs deployed in the cloud.
  - Integrating API tests with cloud CI/CD pipelines.
- Day 5: Practical Microservices Testing
  - Hands-on: Implementing tests for microservices APIs.

Week 8: Final Project and Presentations

- Day 1-4: Project Development
  - Students work on a comprehensive final project that integrates multiple aspects of the curriculum.
  - Project example: Designing, implementing, and automating a full suite of tests for a complex API.
- Day 5: Project Presentation and Evaluation
  - Students present their projects.
  - Feedback and evaluation.

# Our Partners Company's



























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