

## Prompt Engineering for Software Testers

### Section 1: Introduction to Prompt Engineering for Testers

- What is Prompt Engineering in the context of testing?
- Benefits of AI-assisted testing
- Role of AI in test automation & manual testing
- Tools & AI models relevant for testers (ChatGPT, Copilot, Bard, Gemini, etc.)

### Section 2: Writing Effective Prompts for Testing

- Principles of effective prompts for QA tasks
- Generating test cases from requirements and user stories
- Writing prompts for functional & non-functional test scenarios
- Creating boundary value
- Edge case prompts
- Converting acceptance criteria into automated test scripts

### Section 3: Test Automation with AI

- Using AI prompts for Selenium, Cypress, Playwright test scripts
- Writing prompts for API testing (Postman, Rest Assured, etc.)
- Generating unit test cases for multiple languages (Java, Python, JS, etc.)
- AI-assisted test data generation
- AI for mocking APIs & environment setup

### Section 4: Debugging & Issue Analysis

- Using prompts to identify test failures
- Debugging automation scripts with AI guidance

- Writing prompts for root cause analysis of bugs
- AI-assisted defect reporting and documentation

### **Section 5: Advanced Test Engineering with AI**

- Exploratory testing using AI prompts
- Creating reusable prompt templates for test case design
- Regression test optimization with AI
- AI-driven performance & load test scenario creation
- Security testing prompts

### **Section 6: Best Practices & Responsible Usage**

- Avoiding bias in AI-generated test cases
- Ensuring test coverage completeness
- Ethics of AI in testing & compliance
- Maintaining tester + AI collaboration balance