



Gen-AI TESTING

ISTQB Aligned

Fundamentals of AI & QA

- ↳ What is Artificial Intelligence (AI)?
- ↳ Types of AI: Narrow, General, Super Intelligence
- ↳ AI Applications across industries
- ↳ QA evolution: Manual → Automation → AI-driven Testing
- ↳ AI's role in enhancing Test Efficiency & Accuracy

Statistics and Probability for AI Testing

- ↳ Descriptive Statistics: Mean, Median, Mode, Variance, Standard Deviation, Quartiles and Percentiles
- ↳ Inferential Statistics: Hypothesis Testing (F-test, ANOVA)

Machine Learning Basics for Testers

- ↳ ML Overview & Terminology: Features, Labels, Datasets
- ↳ Supervised vs. Unsupervised Learning
- ↳ Regression and Classification Overview
- ↳ Understanding ML Pipelines (Training, Validation, Testing)

AI System Testing Fundamentals

- ↳ AI System Architecture for Testers
- ↳ Test Basis and Test Oracles in AI
- ↳ Functional, Edge, Performance, Bias & Robustness Testing
- ↳ Explainable AI (XAI) for Test Traceability

AI-Assisted Test Automation

- ↳ Overview of AI-enabled Test Tools (Testim, TestSigma, Mabl)
- ↳ AI-based Smart Locators & Self-Healing Tests
- ↳ Object Recognition and Dynamic XPath Handling
- ↳ Intelligent Test Case Prioritization using AI

No-Code / Low-Code Test Automation

- ↳ Introduction to No-Code Platforms (Testim)
- ↳ Test Design, Recording & Editing Scenarios
- ↳ Validations, Assertions, Debugging
- ↳ Best Practices for AI-powered Automation

Generative AI for QA Engineers

- ↳ Introduction to Generative AI and LLMs (GPT, Gemini, Claude)
- ↳ Generating Test Plans, Test Cases, and Data using AI
- ↳ ChatGPT for Functional and Regression Testing

NLP & LLM Testing

- ↳ NLP Fundamentals: Tokenization, Embedding, Intent Recognition
- ↳ Testing Chatbots and Conversational AI Systems
- ↳ Validating LLM Outputs (Accuracy, Relevance, Bias)
- ↳ Retrieval-Augmented Generation (RAG) Testing

AI Testing Strategy & Test Management

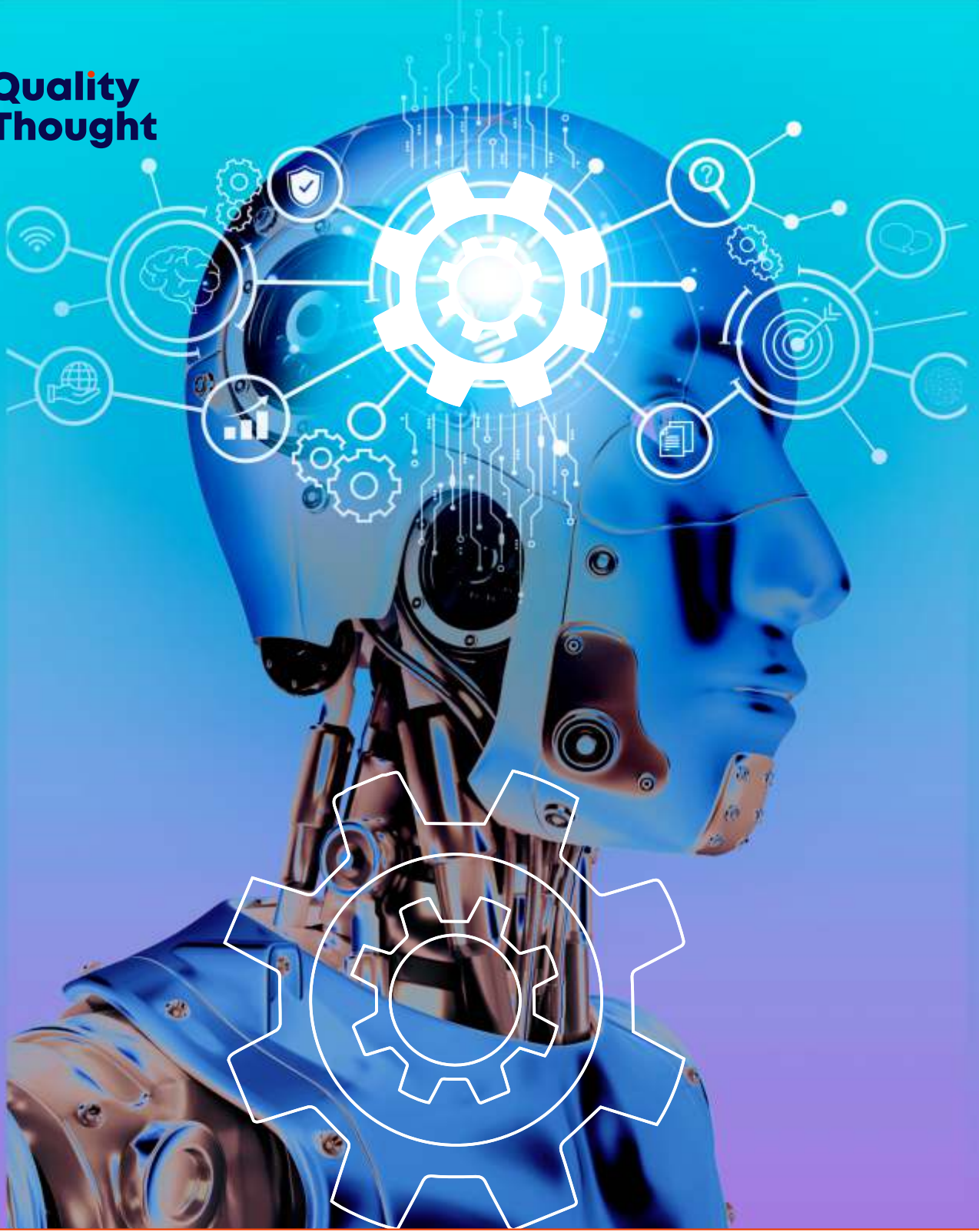
- ↳ Test Planning for AI/ML Projects
- ↳ AI Test Risk Assessment and Prioritization
- ↳ Metrics for AI Testing (Precision, Recall, F1-Score, ROC-AUC)
- ↳ AI Testing Documentation: Strategy, Plan, Traceability Matrix, Defect Reports

Deliverables

- ↳ ISTQB-style Assignments & Quizzes
- ↳ Hands-on AI/ML Testing Projects
- ↳ Practice Tests (ISTQB AI Extension compatible)
- ↳ Certificate of Completion (AI Testing – ISTQB Aligned)

Recommended References

- ↳ ISTQB Certified Tester – AI Testing (CT-AI) Syllabus
- ↳ IEEE Standard 29119 for Software Testing
- ↳ ISO/IEC 24029: AI Trustworthiness Evaluation



**Our Students
Are Placed In**
