

"Certified Tester: Integrating Generative AI in Software Testing"

Course Introduction:

The ISTQB® Certified Tester - Testing with Generative AI (CT-GenAI) course aims to equip software testing professionals with the knowledge and skills necessary to effectively incorporate generative AI into their testing processes. As AI technologies continue to evolve, understanding how to leverage them for software testing is crucial. This course covers a blend of fundamental AI concepts, practical applications, and testing methodologies tailored to generative AI systems.

Module 1: Introduction to Generative AI

- Understanding Generative AI: Explore the basic principles and functionalities of generative AI, emphasizing its role in software testing.
- Key Technologies and Tools: Discover the various technologies and tools that support generative AI systems in testing environments.
- AI in the Software Testing Lifecycle: Learn how AI integrates into different stages of the software testing lifecycle for improved efficiency.

Module 2: Fundamentals of Software Testing with AI

- Principles of AI Testing: Gain insights into the unique principles and challenges associated with testing AI-based systems.
- Traditional vs. AI-driven Testing: Compare and contrast traditional testing methodologies with AI-driven approaches.
- Testing AI Models: Understand the specific considerations when testing AI models, including bias, accuracy, and performance metrics.

Module 3: Generative AI Testing Strategies

- Test Planning for AI Systems: Develop comprehensive test plans that incorporate AI testing strategies for various software applications.
- Risk-based Testing with AI: Learn how to identify and manage risks specific to AI-driven projects.
- Automation in AI Testing: Explore the potential of automation tools in enhancing the efficiency and effectiveness of AI testing processes.

Module 4: Designing Test Cases for Generative AI

- **Criteria for Effective Test Cases:** Identify the criteria that make test cases effective in the context of generative AI.
- **Test Data Management:** Understand the complexities of managing and using test data generated by AI systems.
- **Scenario-based Testing:** Develop scenario-based test cases that address the dynamic nature of generative AI outputs.

Module 5: Implementing AI Testing Tools

- **Overview of AI Testing Tools:** Get acquainted with the leading AI testing tools available in the market and their respective capabilities.
- **Tool Selection and Integration:** Learn how to select the right AI tools for specific testing needs and integrate them into existing workflows.
- **Hands-on with AI Tools:** Gain practical experience using AI testing tools through guided exercises and case studies.

Module 6: Evaluating AI Systems

- **Performance Testing of AI Systems:** Focus on evaluating the performance and scalability of AI systems under various conditions.
- **Usability and User Experience Testing:** Learn methodologies for assessing the usability and user experience of AI-powered applications.
- **Ethical and Compliance Testing:** Understand the ethical considerations and compliance requirements when testing AI systems.

Module 7: Continuous Improvement and Learning

- **Feedback Loops in AI Testing:** Establish effective feedback loops to continuously improve AI testing processes.
- **Staying Updated with AI Trends:** Discover resources and strategies for keeping updated with the latest trends and advancements in AI testing.
- **Case Studies and Industry Applications:** Analyze real-world case studies to understand the application of generative AI in different industries.

Module 8: Preparing for the ISTQB® CT-GenAI Certification Exam

- **Exam Structure and Content:** Familiarize yourself with the structure and content of the ISTQB® CT-GenAI certification exam.

- **Study Tips and Resources:** Access study tips and resources to enhance your exam preparation.
- **Practice Tests and Review:** Engage with practice tests to assess your understanding and readiness for the certification exam.

Conclusion:

The ISTQB® Certified Tester - Testing with Generative AI (CT-GenAI) course provides a comprehensive understanding of how to effectively incorporate and test generative AI systems within the software testing lifecycle. By the end of this course, participants will be equipped with the knowledge and skills needed to adapt to the rapidly evolving landscape of AI-enhanced software testing.