

1. Exercises, Quizzes, Flashcards & Glossary

Number of Questions

2. Expert Instructor-Led Training

3. ADA Compliant & JAWS Compatible Platform

4. State of the Art Educator Tools

5. Award Winning Learning Platform (LMS)

6. Chapter & Lessons

Syllabus

Chapter 1: Introduction to LangChain and LLMs

Chapter 2: Integrating LLM APIs with LangChain

Chapter 3: Building Q&A and Chatbot Apps

Chapter 4: Exploring Large Language Models (LLMs)

Chapter 5: Mastering Prompts for Creative Content

Chapter 6: Building Intelligent Chatbots and Automated Analysis Systems Using Chains

Chapter 7: Building Advanced Q&A and Search Applications Using Retrieval-Augmented Generation (RAG)

Chapter 8: Your First Agent App

Chapter 9: Building Different Types of Agents

Chapter 10: Projects: Building Agent Apps for Common Use Cases

Chapter 11: Building and Deploying a ChatGPT-like App Using Streamlit

Videos and How To

7. Performance Based labs

Lab Tasks

Here's what you get

1.  Exercises

There is no limit to the number of times learners can attempt these. Exercises come with detailed remediation, which ensures that learners are confident on the topic before proceeding.

51
EXERCISES

2. Quiz

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.

110
QUIZ

3. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.

96
FLASHCARDS

4. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.



5. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

6. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

7. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

8. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
 1. Best Postsecondary Learning Solution

- **2015**
 1. Best Education Solution
 2. Best Virtual Learning Solution
 3. Best Student Assessment Solution
 4. Best Postsecondary Learning Solution
 5. Best Career and Workforce Readiness Solution
 6. Best Instructional Solution in Other Curriculum Areas
 7. Best Corporate Learning/Workforce Development Solution

- **2016**
 1. Best Virtual Learning Solution
 2. Best Education Cloud-based Solution
 3. Best College and Career Readiness Solution
 4. Best Corporate / Workforce Learning Solution
 5. Best Postsecondary Learning Content Solution

6. Best Postsecondary LMS or Learning Platform
7. Best Learning Relationship Management Solution

- **2017**

1. Best Overall Education Solution
2. Best Student Assessment Solution
3. Best Corporate/Workforce Learning Solution
4. Best Higher Education LMS or Learning Platform

- **2018**

1. Best Higher Education LMS or Learning Platform
2. Best Instructional Solution in Other Curriculum Areas
3. Best Learning Relationship Management Solution

- **2019**

1. Best Virtual Learning Solution
2. Best Content Authoring Development or Curation Solution
3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution
2. Best Cross-Curricular Solution
3. Best Virtual Learning Solution

9. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Introduction to LangChain and LLMs

- Understanding LangChain
- Why is LangChain Important?
- Real-World Examples of LangChain
- Integrating LLMs with LangChain
- Exploring Core Components of LangChain
- LLM Application Development Workflow
- Key Takeaways
- Looking Ahead

Chapter 2: Integrating LLM APIs with LangChain

- Understanding LLM APIs
- Using Direct LLM API vs. LangChain
- Preparing Your Dev Environment
- Exercise 1: Calling an LLM API Directly
- Key Takeaways

Chapter 3: Building Q&A and Chatbot Apps

- LangChain Framework Components
- LangChain Ecosystem
- Using LangChain Models with LLMs
- Building a Simple Q&A Application
- Building a Conversational App
- Difference Between the Q&A and Chatbot Example
- Error Handling and Troubleshooting
- Development Playground
- Maximize Your Learning Through Experimenting
- Key Takeaways

Chapter 4: Exploring Large Language Models (LLMs)

- OpenAI's Models
- Google's AI Model Overview
- Anthropic's Claude AI Models
- Overview of Cohere AI Models
- Meta AI Models

- Key Learnings

Chapter 5: Mastering Prompts for Creative Content

- Importance of Prompt Engineering
- Prompt Engineering Steps
- Components of a Prompt
- Few-Shot Prompt Template
- Output Parsers
- ChatPrompt Templates
- Case Study: Streamlining Customer Service
- Key Takeaways

Chapter 6: Building Intelligent Chatbots and Automated Analysis Systems Using Chains

- Introduction to LangChain Chains
- Understanding the Components of Chains
- Types of Chains
- Difference Between LCEL and Legacy Chains
- When to Use Different Types of Chains

- Building with LCEL Chains
- Types of LCEL Chains
- Building with Legacy Chains
- Types of Legacy Chains
- Building Real-World Apps with Legacy Chains
- More Complex Workflow Apps Using Chain Composition Strategies
- Advanced Chain Techniques
- Key Takeaways

Chapter 7: Building Advanced Q&A and Search Applications Using Retrieval-Augmented Generation (RAG)

- Importance of RAG
- How Does RAG Work?
- Document Loaders
- Text Splitters
- Vector Stores
- Text Embedding Models
- Retrievers
- Indexing

- Key Takeaways
- References

Chapter 8: Your First Agent App

- Introduction
- Why Agents Matter
- Your First End-to-End Working Agent App
- Key Takeaways

Chapter 9: Building Different Types of Agents

- Learning Objectives
- Designing and Implementing an Agent
- Agent Types
- Key Takeaways

Chapter 10: Projects: Building Agent Apps for Common Use Cases

- Creating a Custom Agent
- Practical Use Cases for Agents
- Key Takeaways

Chapter 11: Building and Deploying a ChatGPT-like App Using Streamlit

- Setting Up Your Development Environment
- Building the Streamlit LangChain UI App
- Deploying the LangChain Application
- Key Takeaways

10. Performance Based Labs

uCertify's performance-based labs are simulators that provides virtual environment. Labs deliver hands on experience with minimal risk and thus replace expensive physical labs. uCertify Labs are cloud-based, device-enabled and can be easily integrated with an LMS. Features of uCertify labs:

- Provide hands-on experience in a safe, online environment
- Labs simulate real world, hardware, software & CLI environment
- Flexible and inexpensive alternative to physical Labs
- Comes with well-organized component library for every task
- Highly interactive - learn by doing
- Explanations and remediation available
- Videos on how to perform

Lab Tasks

- Building a Simple Generative App Using LangChain
- Building a Real-Time Customer Service Chatbot
- Building a Content Generation Platform with LangChain

- Calling an LLM API Using Python
- Using LangChain for a Retrieval Task
- Building a Simple Q&A Application
- Building a Conversational App Using Python
- Exploring Prompt Engineering with OpenAI Playground
- Generating Custom Images from Text Prompts
- Creating a Custom Example Selector from Scratch
- Crafting a Few-Shot Prompt Template for Question Answering
- Building Structured Movie Data Using PydanticOutputParser
- Creating a Chat Prompt Template
- Building and Executing LCEL Chains
- Building Conversational Apps with ConversationChain
- Building a Data Summarization App with Sequential Chains
- Building a Sentiment Analysis App Using Conditional Chains
- Handling Large Datasets with Chains
- Building Data Ingestion Pipeline for RAG
- Using CharacterTextSplitter for Basic Text Chunking
- Generating and Analyzing Text Embeddings
- Generating Content Using AI Agents
- Building an End-to-End Agent Application
- Managing Agent Inputs and Outputs in LangChain
- Building a Structured Chat Agent
- Building a Zero-Shot ReAct Agent
- Implementing Tool-Calling Agents in LangChain
- Creating a Custom Agent in LangChain
- Creating a Recommendation Engine Using LLM Agents
- Building Decision-Making Agent for Live Data Streams
- Running and Testing Streamlit Applications Locally

Here's what you get

31

**PERFORMANCE BASED
LAB**

You can't stay away! Get

 3187 Independence Drive
Livermore, CA 94551,
United States  +1-415-763-6300  support@ucertify.com  www.ucertify.com