

DIGITAL INNOVATION AND TRANSFORMATION | COURSE BROCHURE

Retrieval-Augmented Generation (RAG): Building AI Knowledge Assistants

5 days | Classroom training | English

SMART HORIZON

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Course content

Why attend

Retrieval-augmented generation allows organisations to build AI assistants that answer questions using their own documents, policies and knowledge bases, with references to the sources used. This course explains how RAG systems work and guides participants through planning, building and evaluating a knowledge assistant. Topics include document preparation, chunking, embeddings, vector search, prompt design, evaluation, security and governance. Participants work with practical tools to build a working prototype and leave with a plan for deploying a reliable knowledge assistant in their organisation.

General-purpose chatbots do not know your organisation's policies, products or procedures, and they may produce confident but wrong answers. RAG addresses this by grounding responses in trusted content. This course gives you the practical understanding needed to design, build and govern accurate, secure AI knowledge assistants.

Professional Problems This Course Is Designed to Solve

• Difficulty translating subject knowledge into practical workplace decisions.
• Inconsistent approaches to the activities covered in the course outline.
• Lack of a structured plan for applying and reviewing new skills.

Course methodology

The course is highly practical, combining short technical explanations with guided hands-on labs, architecture design workshops, evaluation exercises and security and governance case studies. Basic familiarity with data or IT concepts is helpful; advanced programming is not required for most exercises.

Course objectives

By the end of this course, participants will be able to:
• Explain how large language models and retrieval-augmented generation work
• Prepare and structure organisational content for retrieval
• Understand embeddings, vector databases and search strategies
• Design prompts and workflows that produce grounded, cited answers
• Evaluate accuracy, relevance and hallucination risk
• Apply security, access control and governance to AI assistants



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Target audience

This course is suitable for:

- IT, data and digital transformation professionals
- Knowledge management and information managers
- Business analysts and solution architects
- Innovation and AI project teams
- Technical managers evaluating AI assistant solutions

Target competencies

Participants will develop competencies in:

- RAG architecture
- Content preparation
- Vector search
- Prompt engineering
- AI evaluation
- AI security and governance

Course outline

Day 1: Foundations of LLMs and RAG

09:00–09:54	How large language models generate answers
09:54–10:48	Limitations: hallucination, knowledge cut-off and context limits
10:48–11:00	What retrieval-augmented generation adds
11:00–11:30	**Coffee break**
11:30–12:12	What retrieval-augmented generation adds (continued)
12:12–13:06	Typical enterprise knowledge assistant use cases
13:06–14:00	Exercise: Identifying RAG opportunities in your organisation

Day 2: Preparing Knowledge Sources

09:00–09:54	Selecting and cleaning documents
09:54–10:48	Chunking strategies and metadata
10:48–11:00	Embeddings and semantic similarity



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11:00–11:30	**Coffee break**
11:30–12:12	Embeddings and semantic similarity (continued)
12:12–13:06	Keeping content current and version-controlled
13:06–14:00	Lab: Preparing a document collection for retrieval

Day 3: Retrieval and Generation

09:00–09:54	Vector databases and hybrid search
09:54–10:48	Ranking and filtering results
10:48–11:00	Prompt templates for grounded and cited answers
11:00–11:30	**Coffee break**
11:30–12:12	Prompt templates for grounded and cited answers (continued)
12:12–13:06	Conversation memory and follow-up questions
13:06–14:00	Lab: Building a prototype knowledge assistant

Day 4: Evaluation and Improvement

09:00–09:54	Measuring answer accuracy, relevance and faithfulness
09:54–10:48	Building test question sets
10:48–11:00	Detecting and reducing hallucinations
11:00–11:30	**Coffee break**
11:30–12:12	Detecting and reducing hallucinations (continued)
12:12–13:06	User feedback and continuous improvement
13:06–14:00	Lab: Evaluating and improving the prototype

Day 5: Security, Governance and Deployment

09:00–09:54	Access control and sensitive information
09:54–10:48	Data protection and regulatory considerations
10:48–11:00	Monitoring, logging and human oversight



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11:00–11:30	**Coffee break**
11:30–12:12	Monitoring, logging and human oversight (continued)
12:12–13:06	Deployment options and costs
13:06–14:00	Capstone: Deployment plan for an enterprise knowledge assistant

The timings provided are estimates and may vary depending on the number of participants and the discussions taking place during the sessions. They are indicative only and do not constitute a binding commitment.

Dates, venues and fees

Current published course plans. Fees are per participant in EUR, excluding unconfirmed taxes.

Venue	Start date	End date	Fee (EUR)
Singapore Confirmed dates	16 Nov 2026	20 Nov 2026	**€2,820.–**
Online Confirmed dates	16 Nov 2026	20 Nov 2026	**€1,250.–**
London Confirmed dates	7 Dec 2026	11 Dec 2026	**€2,450.–**
Online Confirmed dates	7 Dec 2026	11 Dec 2026	**€1,250.–**
Dubai Confirmed dates	14 Dec 2026	18 Dec 2026	**€3,150.–**
Online Confirmed dates	14 Dec 2026	18 Dec 2026	**€1,250.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Frankfurt Confirmed dates	4 Jan 2027	8 Jan 2027	**€2,650.–**
Online Confirmed dates	4 Jan 2027	8 Jan 2027	**€1,250.–**
Kuala Lumpur Confirmed dates	18 Jan 2027	22 Jan 2027	**€1,450.–**
Online Confirmed dates	18 Jan 2027	22 Jan 2027	**€1,250.–**
Cape Town Confirmed dates	25 Jan 2027	29 Jan 2027	**€1,890.–**
Online Confirmed dates	25 Jan 2027	29 Jan 2027	**€1,250.–**
Paris Confirmed dates	1 Feb 2027	5 Feb 2027	**€2,860.–**
Online Confirmed dates	1 Feb 2027	5 Feb 2027	**€1,250.–**
Istanbul Confirmed dates	15 Feb 2027	19 Feb 2027	**€2,650.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	15 Feb 2027	19 Feb 2027	**€1,250.–**
Amsterdam Confirmed dates	1 Mar 2027	5 Mar 2027	**€2,540.–**
Online Confirmed dates	1 Mar 2027	5 Mar 2027	**€1,250.–**
Singapore Confirmed dates	15 Mar 2027	19 Mar 2027	**€2,820.–**
Online Confirmed dates	15 Mar 2027	19 Mar 2027	**€1,250.–**
Cape Town Confirmed dates	29 Mar 2027	2 Apr 2027	**€1,890.–**
Online Confirmed dates	29 Mar 2027	2 Apr 2027	**€1,250.–**
London Confirmed dates	5 Apr 2027	9 Apr 2027	**€2,450.–**
Online Confirmed dates	5 Apr 2027	9 Apr 2027	**€1,250.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Dubai Confirmed dates	19 Apr 2027	23 Apr 2027	**€3,150.–**
Online Confirmed dates	19 Apr 2027	23 Apr 2027	**€1,250.–**
Frankfurt Confirmed dates	3 May 2027	7 May 2027	**€2,650.–**
Online Confirmed dates	3 May 2027	7 May 2027	**€1,250.–**
Kuala Lumpur Confirmed dates	17 May 2027	21 May 2027	**€1,450.–**
Online Confirmed dates	17 May 2027	21 May 2027	**€1,250.–**
Vienna Confirmed dates	24 May 2027	28 May 2027	**€2,940.–**
Online Confirmed dates	24 May 2027	28 May 2027	**€1,250.–**
Paris Confirmed dates	7 Jun 2027	11 Jun 2027	**€2,860.–**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	7 Jun 2027	11 Jun 2027	**€1,250.-**
Istanbul Confirmed dates	21 Jun 2027	25 Jun 2027	**€2,650.-**
Online Confirmed dates	21 Jun 2027	25 Jun 2027	**€1,250.-**
Amsterdam Confirmed dates	5 Jul 2027	9 Jul 2027	**€2,540.-**
Online Confirmed dates	5 Jul 2027	9 Jul 2027	**€1,250.-**
Singapore Confirmed dates	19 Jul 2027	23 Jul 2027	**€2,820.-**
Online Confirmed dates	19 Jul 2027	23 Jul 2027	**€1,250.-**
Rome Confirmed dates	26 Jul 2027	30 Jul 2027	**€2,450.-**
Online Confirmed dates	26 Jul 2027	30 Jul 2027	**€1,250.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
London Confirmed dates	2 Aug 2027	6 Aug 2027	**€2,450.-**
Online Confirmed dates	2 Aug 2027	6 Aug 2027	**€1,250.-**
Dubai Confirmed dates	16 Aug 2027	20 Aug 2027	**€3,150.-**
Online Confirmed dates	16 Aug 2027	20 Aug 2027	**€1,250.-**
Frankfurt Confirmed dates	6 Sept 2027	10 Sept 2027	**€2,650.-**
Online Confirmed dates	6 Sept 2027	10 Sept 2027	**€1,250.-**
Kuala Lumpur Confirmed dates	20 Sept 2027	24 Sept 2027	**€1,450.-**
Online Confirmed dates	20 Sept 2027	24 Sept 2027	**€1,250.-**
Barcelona Confirmed dates	27 Sept 2027	1 Oct 2027	**€2,840.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Online Confirmed dates	27 Sept 2027	1 Oct 2027	**€1,250.-**
Paris Confirmed dates	4 Oct 2027	8 Oct 2027	**€2,860.-**
Online Confirmed dates	4 Oct 2027	8 Oct 2027	**€1,250.-**
Istanbul Confirmed dates	18 Oct 2027	22 Oct 2027	**€2,650.-**
Online Confirmed dates	18 Oct 2027	22 Oct 2027	**€1,250.-**
Amsterdam Confirmed dates	1 Nov 2027	5 Nov 2027	**€2,540.-**
Online Confirmed dates	1 Nov 2027	5 Nov 2027	**€1,250.-**
Singapore Confirmed dates	15 Nov 2027	19 Nov 2027	**€2,820.-**
Online Confirmed dates	15 Nov 2027	19 Nov 2027	**€1,250.-**



Course content

Dates, venues and fees (continued)

Venue	Start date	End date	Fee (EUR)
Rome Confirmed dates	29 Nov 2027	3 Dec 2027	**€2,450.–**
Online Confirmed dates	29 Nov 2027	3 Dec 2027	**€1,250.–**
London Confirmed dates	6 Dec 2027	10 Dec 2027	**€2,450.–**
Online Confirmed dates	6 Dec 2027	10 Dec 2027	**€1,250.–**
Dubai Confirmed dates	13 Dec 2027	17 Dec 2027	**€3,150.–**
Online Confirmed dates	13 Dec 2027	17 Dec 2027	**€1,250.–**



Course content

Plan your next step

Dates, availability, exact venue, taxes, inclusions and payment terms require written confirmation. This brochure is not a quotation, registration, booking confirmation or visa invitation. Participants receive a Smart Horizon certificate of attendance; programmes are not externally accredited and do not award a professional qualification or designation. Confirm arrangements before booking travel.

For group or in-house training, contact our learning team to discuss your objectives and delivery arrangements.

Contact Smart Horizon

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