european actuarial academy

ANNOUNCEMENT

EAA Web Session
GenAI Beyond the Basics: Advanced Concepts for Actuaries

10 December 2025 | 10:00–12:00 CET | online

Introduction

Generative AI (GenAI) tools, such as ChatGPT, are rapidly reshaping the way actuaries approach problem-solving, analysis, and communication. Beyond their familiar web-based interfaces, these tools offer powerful functionalities through programmatic integration, which allows users to directly access and interact with the underlying Large Language Models (LLMs) via APIs (Application Programming Interfaces). Unlike standard web-based interactions, API access enables actuaries to seamlessly integrate GenAI into their existing workflows and scale usage efficiently to handle larger volumes. In this two-hour web session, participants will experience live demonstrations of advanced GenAI concepts through a Jupyter notebook that presents each concept and applies it to actuarial use cases; the notebook will be shared with attendees to encourage experimentation and support adoption in their own actuarial workflows.

After introducing the basics of using LLMs through APIs, we will explore the following advanced GenAI concepts:

- Structured Outputs: Generating responses in structured formats like JSON to support easier and more reliable downstream processing.
- Function Calling: Enabling LLMs to execute predefined functions, such as calculations or database queries, to perform specific operations.
- Fine-Tuning: Customizing pretrained LLMs with domain-specific data to improve accuracy and relevance in generating responses.
- Retrieval-Augmented Generation (RAG): Combining LLMs with external data sources to produce contextually enriched outputs.

For each concept, the session will cover its purpose, underlying principles, and functionality, illustrated through a dedicated actuarial use case and complemented by further applications and resources. It will conclude with a forward-looking outlook on emerging developments, followed by an open Q&A and discussion.

Participants

This web session is designed for actuaries, data scientists, and other professionals in the insurance and financial industries who wish to deepen their technical understanding of GenAI tools. It offers practical insights for those new to programming and GenAI, while also enabling experienced users to refine their skills and explore advanced techniques.

A basic familiarity with Python (or another modern programming language) is helpful but not required. The session provides clear guidance and hands-on examples to ensure accessibility for all participants.

Purpose and Nature

The aim of this web session is to equip participants with the knowledge and practical skills needed to apply advanced GenAI concepts in actuarial contexts. By the end of the session, participants will be able to:

- Understand how to interact with GenAI tools programmatically through APIs.
- Customize LLMs using fine-tuning techniques to address domain-specific requirements.
- Combine external data with LLMs through Retrieval-Augmented Generation to produce contextually relevant outputs.
- Leverage Function Calling capabilities to trigger the execution of predefined functions in the underlying programming language, such as calculations or database queries.
- Generate structured outputs in JSON format to ensure compatibility of the responses with actuarial processes and systems.
- Apply Python programming skills to develop and integrate GenAI-powered solutions into actuarial workflows.

The session strikes a balance between conceptual understanding and hands-on programming, providing participants with tools to enhance the accuracy, efficiency, and creativity of their actuarial work.

Language

The language of the web session will be English.

Lecturer

Dr Simon Hatzesberger
Simon Hatzesberger is an actuary working as a Manager in Actuarial & Insurance Services at Deloitte. During his previous tenure in the actuarial department at Allianz Private Health, he was responsible for various data- and AI-related topics for several years. He holds an MSc degree in Financial Mathematics and Actuarial Sciences from the Technical University of Munich, as well as an MSc degree in Computer Science and a PhD in Mathematical Stochastics from the University of Passau. Additionally, he is a member of the German Association of

Actuaries, a Certified Actuarial Data Scientist, and a Certified Enterprise Risk Actuary. He is actively involved in several Actuarial Data Science committees of the German Association of Actuaries, serves as a workstream lead in the Artificial Intelligence Task Force of the International Association of Actuaries, and is a member of EIOPA's Consultative Expert Group on Data Use in Insurance.

Preliminary Programme

Wednesday, 10 December 2025

10:00–10:10	Welcome and Introduction
10:10–10:25	Foundations: Using LLMs through APIs
10:25–11:50	Exploring Advanced GenAI Concepts – Structured Outputs – Function Calling – Fine-Tuning – Retrieval-Augmented Generation (RAG)
11:50–12:00	Outlook and Interactive Q&A

All the above times are given in CET (Central European Time).

Fees & Registration

Early Bird Registration Fee (until 29 October 2025):

- For private customers in the EU: €150.00 + VAT of the billing country (example Germany: €178.50 incl. 19% VAT)
- For private customers outside the EU: €178.50 (incl. 19% VAT)
- For businesses within the EU (excl. Germany, with valid VAT ID): €150.00 (net, reverse charge applies)
- For businesses in Germany: €178.50 (incl. 19% VAT)

Regular Registration Fee (from 30 October 2025):

- For private customers in the EU: €195.00 + VAT of the billing country (example Germany: €232.05 incl. 19% VAT)
- For private customers outside the EU: €232.05 (incl. 19% VAT)
- For businesses within the EU (excl. Germany, with valid VAT ID): €195.00 (net, reverse charge applies)
- For businesses in Germany: €232.05 (incl. 19% VAT)

Important VAT Information:

- For private customers with a billing address in an EU country: VAT will be charged at the applicable rate in the country of the billing address. The final amount, including VAT, will be calculated upon invoicing.
- For customers with a non-EU (third country) billing address: Only a non-company billing address is accepted for VAT compliance reasons. 19% VAT applies to all non-EU private customers.

- For businesses within the EU (excluding Germany), Iceland, Liechtenstein, Norway, Switzerland, and the UK with a valid VAT ID: The reverse charge mechanism applies (net price; VAT will not be charged). Please ensure your valid VAT ID is entered correctly during registration.
- For all customers with a billing address in Germany: 19% VAT applies.

Please submit your registration using this online form. Closer to the event, you will receive further login details to join the web session.

Your registration is binding. Cancellation is only possible up to 2 weeks before the first day of the event. If you cancel later, the full participation fee is due. You may appoint someone to take your place but must notify us in advance. EAA has the right to cancel the event if the minimum number of participants is not reached.

We will send you an invoice via email. Please allow a few days for handling. Please always give your invoice number when you effect payment. All bank charges are to be borne by the participant.

Registration is open until two working days before the web session. If registration has already been closed for this web session, please call us or send an email to contact@actuarial-academy.com in order to find out whether a late registration is still possible.

Technical Requirements

Please check with your IT department if your firewall and computer settings support web session participation (the programme *Zoom* will be used for this online training). Please also make sure to join the web session with a stable internet connection.

CPD

For this web session, the following CPD credits are available under the CPD scheme of the relevant national actuarial association:

Austria:	2 points
Belgium:	2 points
Bulgaria:	3 points
Croatia:	individual accreditation
Czechia:	2 hours
Denmark	2 credits
Estonia:	2 hours
Finland:	2 points
France:	12 points
Germany:	2 hours
Greece:	3 points
Hungary:	2 hours
Iceland:	2 credits

Ireland:	2 hours
Italy:	individual accreditation
Latvia:	2 hours
Lithuania:	2 hours
Netherlands:	approx. 2 points (individual accreditation)
Norway:	2 points
Poland:	2 hours
Portugal:	2 hours
Serbia:	2 hours
Slovakia:	individual accreditation
Slovenia:	individual accreditation
Spain:	CAC: 2 hours, IAE: 2 hours
Switzerland:	individual accreditation
USA:	SOA (Section B): up to 2.4 hours

No responsibility is taken for the accuracy of this information.