

LA TECHNOLOGY TRANSFER PRESENTS

# IVAN REZNIKOV

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**GENERATIVE AI**

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**practical applications of RAG**

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**(Retrieval-Augmented Generation) for Business**

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ONLINE LIVE STREAMING

JUNE 12, 2025



info@technologytransfer.it  
www.technologytransfer.it

## ABOUT THIS SEMINAR

In today's data-driven business environment, leveraging advanced AI technologies is crucial for gaining a competitive edge. This course offers a comprehensive exploration of Retrieval-Augmented Generation (RAG) using the LangChain framework, focusing on practical applications tailored for business contexts.

Participants will study practical aspects of integration of external data sources with large language models (LLMs) to increase their capabilities, enabling the development of sophisticated AI-driven solutions, allowing you or external user to chat with a slice of your data.

### What you will learn

Throughout the course, learners will engage with real-world scenarios, applying RAG techniques to address common business challenges. By utilizing LangChain participants will gain hands-on experience in creating applications that seamlessly combine LLMs, prompt templates, and vector databases. This practical approach ensures that learners can immediately apply their skills to enhance business operations.

- Introduction to RAG
- Setting Up Data Ingestion and Indexing
- Building and Optimizing RAG Pipelines
- Evaluating and Minimizing Hallucinations
- Advanced RAG Techniques and Best Practices
- Using LangSmith for Comprehensive Evaluation

By the end of the course, learners will be proficient in analyzing structured data using natural language processing techniques and creating sophisticated AI-driven applications, ready to apply these skills in real-world business scenarios.

### Who Should Attend

This seminar is ideal for:

- **Developers and Software Engineers:** Those looking to build and customize applications using language models
- **Data Scientists and Machine Learning Engineers:** Professionals interested in integrating LLMs with data sources and refining Prompts for more accurate responses
- **Product Managers and Technical Leads:** Individuals overseeing teams and projects incorporating AI and language model technologies
- **AI and Technology Enthusiasts:** Anyone interested in the latest developments in AI, language models, and their practical applications

# OUTLINE

## 1. Introduction to LangChain

- Overview of LangChain as an Open-Source Framework
- Understanding the Integration of LangChain with Large Language Models (LLMs)

## 2. Key Features of LangChain

- Management of LLMs and Prompts
- Chains: Understanding Sequences of Calls to LLMs and Other Utilities
- Data Augmented Generation: Integrating External Data Sources with LangChain
- Agents: Creating Agents that Allow LLMs to Make and Act upon Decisions
- Memory: Implementing Memory to Maintain the State Between Calls
- Evaluation: Approaches to Assess Models Using LLMs Themselves

## 3. Introduction to RAG and Building RAG Pipelines

- Understanding the Basics of Retrieval-Augmented Generation
- Ingesting and Indexing Data Using LangChain's Built-in Document Loaders and Vector Stores
- Developing Pipelines that Load, Split, and Store Data
- Implementing Advanced Retrieval Techniques

## 4. Evaluating and Minimizing Hallucinations

- Utilizing LangSmith to Evaluate and Refine RAG Systems
- Evaluation Metrics and Techniques
- Setting Up LangSmith Environment Variables for Tracing
- Analyzing and Debugging RAG Pipelines

## 5. Advanced RAG Techniques

- Integrating RAG with real-world examples
- Health checks (toxicity, misinformation, etc) of RAG Systems
- Practical Applications and Challenges of Deploying RAG Systems
- RAG over Graph DBs

# INFORMATION

## PARTICIPATION FEE

€ 900

The fee includes all seminar documentation.

## SEMINAR TIMETABLE

9.30 am - 1.00 pm  
2.00 pm - 5.00 pm

## HOW TO REGISTER

You must send the registration form with the receipt of the payment to:  
info@technologytransfer.it

TECHNOLOGY TRANSFER S.r.l.  
Piazza Cavour, 3 - 00193 Rome (Italy)

## PAYMENT

Wire transfer to:  
Technology Transfer S.r.l.  
Banca: Cariparma  
Agenzia 1 di Roma  
IBAN Code:  
IT 03 W 06230 03202 000057031348  
BIC/SWIFT: CRPPIT2P546

## GENERAL CONDITIONS

### DISCOUNT

The participants who will register 30 days before the seminar are entitled to a 5% discount.

If a company registers 5 participants to the same seminar, it will pay only for 4.

Those who benefit of this discount are not entitled to other discounts for the same seminar.

### CANCELLATION POLICY

A full refund is given for any cancellation received more than 15 days before the seminar starts. Cancellations less than 15 days prior the event are liable for 50% of the fee. Cancellations less than one week prior to the event date will be liable for the full fee.

### CANCELLATION LIABILITY

In the case of cancellation of an event for any reason, Technology Transfer's liability is limited to the return of the registration fee only.

## IVAN REZNIKOV GENERATIVE AI

practical applications of RAG (Retrieval-Augmented Generation) for Business

June 12, 2025

Registration fee:  
€ 900

If registered participants are unable to attend, or in case of cancellation of the seminar, the general conditions mentioned before are applicable.

first name .....

surname .....

job title .....

organisation .....

address .....

postcode .....

city .....

country .....

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e-mail .....



Stamp and Signature

Send your registration form with the receipt of the payment to:  
**Technology Transfer S.r.l.**  
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Tel. +39-06-6832227 - Fax +39-06-6871102  
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## ***SPEAKER***

**Ivan Reznikov** is a Principal Data Scientist, who brings over a dozen years of proficiency in Python and Data Science. Dr. Ivan Reznikov holds a PhD degree in Computational Sciences and is a Professor in Middlesex University Dubai, teaching a Master's in Data Science program. He is currently dedicating his expertise to authoring LangChain for Life Sciences, a book published by O'Reilly.

Ivan worked as the Chief Technology Officer and Chief AI Officer in several startups and companies. He has spoken on TEDx, GITEX and PyCON MEA and holds the Kaggle Competition Expert title.