**Building Generative AI Applications – exclusive workshop for esynergy associates**

**Workshop for esynergy LA and the wider community- this is going to be 100% virtual course.**

**Date and time : GMT evening after 5 pm in the week starting 11th of December; will give more specific details for registered individuals.**

This course prepares you to build solutions that leverage generative AI features to make discovery easier, faster, and more effective. The course consists of presentations, demos, and hands-on labs where you work with GenAI models and services and build realistic GenAI search applications.

**Learning Objectives**

After successfully completing this course, you will be able to:

* Identify opportunities to leverage GenAI-enabled search solutions for multiple use cases.
* Understand key concepts specific to GenAI search, such as embeddings, vector search, and retrieval-augmented generation (RAG).
* Evaluate various technology stacks and select architectures best suited for their use cases.
* Design solutions using best practices
* Begin building search applications from scratch or by using managed platforms.

**Who should attend?**

This course is designed for developers, solution architects, and others involved in the design, development, and operation of software systems. You need to have good Python skills.

**Course Outline**

**Generative AI-Enabled Search in Action**

* Hands-On Tour of Real-World Search Applications
* What Are the Benefits of GenAI-Enabled Search?
* What are the risks of such solutions?

**GenAI Search Fundamentals**

* Embeddings and Similarity Searches
* Generative AI for Composing Search Responses
* Citations
* Risks and Mitigations
* A Sample Architecture

**Tools and technologies**

* Creating Text and Image Embeddings
* Databases That Support Vector Search
* Langchain

**Langchain Fundamentals**

* Langchain Concepts
  + Models
  + Prompts
  + Memory
  + Indexes
  + Chains
* Creating Embeddings Using Langchain
* Creating retrieval chains with Langchain

**Building custom search applications**

* Creating the Retrieval Chain
* Doing the Similarity Search
* Composing the Response