

Workshop 4: Building Chatbot RAG Systems with Vector Store, Langchain & Function Calling



Workshop Objective

Advanced Retrieval-Augmented Generation

Building intelligent chatbots that retrieve and generate knowledge

What you'll learn:

→ FAISS/PineCone Fast Vector Search Langchain
Prompt & Chain
Management

Function CallingDynamic Capabilities

Handle prompts effectively



Application Options

Choose One or Define Your Own:

Customer Support Intelligent FAQ bot with context-aware responses

Employee Onboarding **Assistant for new hire processes and policies**

XIT Helpdesk Bot Technical support and troubleshooting

Sales Lead Qualification Product knowledge assistant for sales teams

Al Tools Usage Guidelines

Tool / Tech	■ Usage
FAISS	Local vector database for fast similarity search
Langchain	Building prompt chains, managing conversational flows, retrieval integration, function calling
OpenAI or Langchain Function Calling	Enhance chatbot by invoking functions for dynamic/external data responses
Mock Data Generation	Create synthetic datasets simulating realistic business/user data

122 Team Composition & Roles

- Teams of 5-7 participants collaboratively develop all aspects
- No fixed roles members share ideation, coding, prompt engineering, and testing
- **© Focus:** End-to-end RAG pipeline from data embedding → retrieval → generation + function calling

Deliverables by End of Workshop

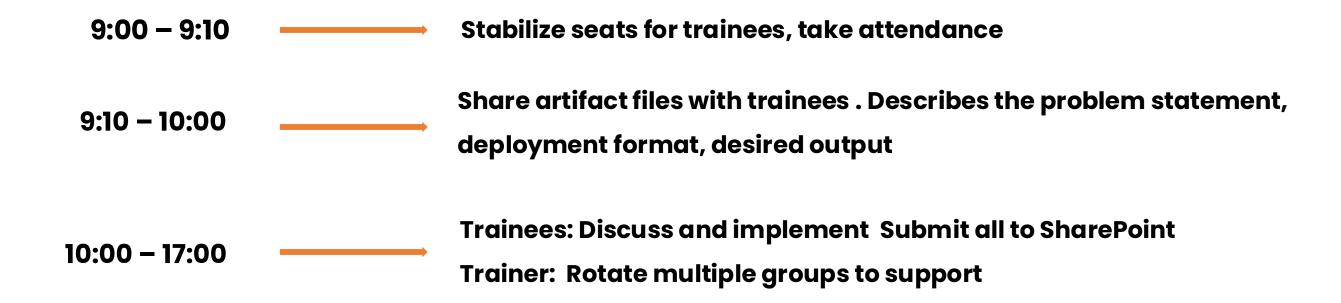
- Clearly defined problem statement and mock data schema
- El FAISS, PineCone or vector store populated with embeddings

- **XX** Langchain chain configuration combining retrieval and generation
- Nature OpenAI function call integration extending chatbot abilities

Fully functional chatbot prototype with UI or notebook

Team presentation with demo, insights, and lessons learned











THANKYOU!

Ready to Build Amazing Al Tools?
Let's turn your repetitive tasks into automated solutions!