LLM Unleashed: Igniting Careers, Transforming Business

Unlocking the Potential of OpenAI, Embracing Open Source LLMs, Mastering Prompt Engineering, Crafting your own LLM & Building Intelligent Applications

Dates & Venue

January 08 - 12, 2024 SREC SPARK Incubation Foundation, Sri Ramakrishna Engineering College Campus, Vattamalaipalayam, Coimbatore, Tamil Nadu.

Embark on a transformative journey with 'LLM Unleashed', a 5-day immersive workshop designed for students, professionals, and visionary entrepreneurs. Explore the power of OpenAI, delve into open source LLMs, and ignite your potential in crafting the future of AI innovation. Master prompt engineering, build intelligent applications, and elevate your career with expert talks. Join us in unlocking the next frontier of language models!

LLM Fundamentals

- Large Language Models
- Transformers and Attention
- OpenAI LLMs
- Open Source LLMs

★ LLM Development/Customization

- **Prompt Engineering**
- Data Preparation Flow
- Langchain
- Fine Tuning LLMs

LLM Solutions - Building & Deploying Applications

- **Question Answering**
- **Text Generation**
- Text Retrieval/Extraction
- Retrieval-Augmented Generation
- **Ethical Considerations**
- LLMOps

Chatbots

Expert Talks from Academia & Industry: Elevating Your Understanding

- ★ How to accelerate your Business Model with Generative AI?
- ★ Can Langehain be used in production?
- ★ Beyond Tables and Vectors: Knowledge Graphs for AI Reasoning?
- ★ How to Build an Intelligent QA Chatbot with LLMs?
- ★ How to make your RAG mode production ready?

Detailed Course Content

Day 1: Foundations of Large Language Models

Morning Session: Unveiling the Power of Language Models

- ★ Overview of Natural Language Processing (NLP) and Its Diverse Applications
- ★ Introduction to Language Models
- ★ Demystifying Transformers and the Attention Mechanism

Afternoon Session: Navigating the Landscape of Large Language Models

- ★ Introduction to Popular LLMs (GPT, LLaMA, Mistral, etc.)
- ★ Dive into Hugging Face: Your Gateway to Language Models
- ★ Running a Large Language Model from your Laptop

Day 2: Mastering Prompt Engineering with OpenAl API

Morning Session: Crafting the Perfect Prompt

- ★ Art and Science of Prompt Engineering
- ★ Exploring Different Types of Prompts
- ★ Strategies for Writing Impactful Prompts

Afternoon Session: Harnessing the Power of OpenAl API and Langchain

- ★ Introduction to OpenAl API: Your Key to Language Magic
- ★ Unveiling Langchain: Bridging Prompt Engineering with OpenAl
- ★ Transforming Concepts into Powerful Prompts

Day 3: Fine-Tuning for Precision: Open Source Language Models

Morning Session: Open Source Language Models Unveiled

- ★ Navigating the Open Source Landscape
- ★ Consuming Language Models from Hugging Face
- ★ Data Preparation Mastery

Afternoon Session: The Art of Fine-Tuning

- ★ Deep Dive into Fine-Tuning Language Models
- ★ Guiding Principles of Parameter-Efficient Fine-Tuning (PEFT)
- ★ Crafting Your Refined Language Model

Day 4: Building Intelligent Applications with Large Language Models

Morning Session: Transforming Ideas into Applications

- ★ Application Development Primer with Language Models
- ★ Introduction to FastAPI and Streamlit for Rapid Prototyping
- ★ Building Your Application with a Language Model

Afternoon Session: Advancing with RAG Framework and Vector Databases

- ★ Exploring Retrieval-Augmented Generation (RAG) Framework
- ★ Introduction to Vector Databases for Enhanced Efficiency
- ★ Crafting an Intelligent Document Chat Application

Day 5: Navigating LLMOps and Capstone Project

Morning Session: Journey into LLMOps and Ethical Considerations

- ★ Introduction to LLMOps: Managing and Scaling Language Models
- ★ Deployment Strategies for Your Language Model
- ★ Unpacking Ethical Implications and Best Practices

Afternoon Session: Culminating in a Capstone Project

- ★ Uniting Insights via a Capstone Project
- ★ Project Presentations and Peer Feedback
- ★ Closing Remarks and Certification Ceremony

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