Cognixia®

Working with LLMs

www.cognixia.com

About Cognixia

Cognixia- A Digital Workforce Solutions Company is dedicated to delivering exceptional trainings and certifications in digital technologies. Founded in 2014, we provide interactive, customized training courses to individuals and organizations alike, and have served more than 130,000 professionals across 45 countries worldwide.

Our team of more than 7000 industry experts facilitate more than 450 comprehensive digital technologies courses, along with state-of-the-art infrastructure, to deliver the best learning experience for everyone. Our comprehensive series of instructor-led online trainings, classroom trainings and on-demand self-paced online trainings cover a wide array of specialty areas, including all of the following:

- IoT
- Big Data
- Cloud Computing
- Cyber Security
- Machine Learning
- AI & Deep Learning
- Blockchain Technologies
- DevOps

Cognixia is ranked amongst the top five emerging technologies training companies by various prestigious bodies. We're also RedHat Enterprise Partner, Microsoft Silver Learning Partner and an authorized training partner for ITIL, Automation Anywhere and ISC2.

OUR AWARDS & AFFILIATIONS

Best Workplace Amongst Emerging Enterprises Awarded By **Great Indian Workplace Awards** – 2018
Mumbai, India

Best Training Provider of the Year
Awarded By
The Golden Globe Tiger Awards – 2018
Kuala Lampur, Malaysia

World HRD Congress has awarded for Excellence in Training (Asia)

WORLD HRD CONGRESS
Cognixia is awarded as Training Company of the Year, 2018

ISO 9001:2015 CERTIFIED
ISO 9001:2015 Certified Quality Management System

ISO
ISO/IEC 27001:2013 Certified Information Security Management System

AFRICA LEADERSHIP EXCELLENCE
Best Emerging Technology Training Organization at the Middle East Training & Development Leadership Awards 2018

TOP 5 CLOUD TRAINING INSTITUTIONS INDIA 2016 — HIGHER EDUCATION Review

TOP 5 Big Data TRAINING INSTITUTES 2017 — siliconindia

TOP 10 PROMISING IoT TRAINING INSTITUTES IN INDIA 2017 — HIGHER EDUCATION Review

Top 10 IoT Training Companies for the **Second consecutive year.** — 2017 IoT India MAGAZINE

siliconindia BEST TRAINING PROVIDER
BIG DATA HADOOP DEVELOPER OF THE YEAR 2016

Top 10 IoT Training Institutes – 2016
Analytics India MAGAZINE

Asian Training & Leadership Award, Dubai

TOP 5 Emerging Technologies TRAINING COMPANIES 2016 — siliconindia

AUTHORIZED TRAINING PARTNERS FOR

(ISC)² OFFICIAL TRAINING PARTNER

AUTOMATION ANYWHERE

ITIL®

Silver Microsoft Partner

PMI®

Large Language Models Market Outlook

- The generative AI market is poised to explode, growing to $1.3 trillion over the next 10 years from a market size of just $40 billion in 2022, according to a new report by Bloomberg Intelligence.
- The rising demand for generative AI products could add about $280 billion of new software revenue, driven by specialized assistants, new infrastructure products, and copilots that accelerate coding.
- According to QYResearch, the Large Language Model (LLM) Market was valued at 10.5 Billion USD in 2022 and is anticipated to reach 40.8 Billion USD by 2029, witnessing a CAGR of 21.4% during the forecast period 2023-2029.

Cognixia's Working with LLMs training & certification

This course delves into the intricate world of large language models, covering a broad array of topics from Unimodal mappings to the advanced features of MakerSuite. Participants will embark on a learning journey, gaining a robust understanding of various AI models, their architecture, functionalities, and practical applications. The course is structured into 24 detailed modules, each focusing on specific aspects, ensuring a comprehensive and focused learning experience.

Who should take this course?

The course is recommended for anyone learning to work effectively with various large language models and understand their architecture, functionalities, and practical applications.

Prerequisites

Learners need to have –

- Understanding of Machine Learning Concepts
- Deep Learning Fundamentals
- Experience with NLP Techniques
- Programming Skills
- Hands-on Experience with Data Handling
- Mathematics Background
- Hardware Understanding

Program Structure

- 40 hours of live online instructor-led training
- Industry-experienced instructor
- Multiple hands-on exercises and labs to ensure a great learning experience

DETAILED CURRICULUM : MODULES

Module 1: Introduction to Txt2Txt GenAI

Lessons:

- Overview of Txt2Txt GenAI.
- Introduction to Unimodal Mappings.
- Understanding the Significance of Txt2Txt GenAI in AI.

Lab:

- Hands-on session: Exploring the basics of Txt2Txt GenAI.
- Interactive exercises: Working with unimodal mappings.

After completing this module, students will be able to:

- Understand the basic concepts of Txt2Txt GenAI.
- Gain insights into unimodal mappings.

Module 2: Exploring Statistical Language Models

Lessons:

- Introduction to Statistical Language Models.
- Exploring the Applications of Statistical Language Models.
- Hands-on Experience with Statistical Language Models.

Lab:

- Hands-on workshop: Working with Statistical Language Models.
- Interactive exercises: Experimenting with various Statistical Language Models.

After completing this module, students will be able to:

- Understand the concept and application of Statistical Language Models.
- Gain hands-on experience with Statistical Language Models.

Module 3: Neural Language Models

Lessons:

- Overview of Neural Language Models.
- Deep Dive into the Architecture of Neural Language Models.
- Exploring the Applications of Neural Language Models.

Lab:

- Hands-on session: Working with Neural Language Models.
- Interactive exercises: Understanding the architecture of Neural Language Models.

After completing this module, students will be able to:

- Understand the architecture and functionality of Neural Language Models.
- Explore the applications of Neural Language Models.

Module 4: SLM and PLM in Python and Keras

Lessons:

- Introduction to SLM and PLM in Python and Keras.
- Exploring the Implementation of SLM and PLM.
- Hands-on Experience with SLM and PLM in Python and Keras.

Lab:

- Hands-on workshop: Implementing SLM and PLM using Python and Keras.
- Interactive exercises: Working with SLM and PLM in practical scenarios.

After completing this module, students will be able to:

- Understand and implement SLM and PLM using Python and Keras. Gain practical experience with SLM and PLM.

DETAILED CURRICULUM : MODULES

Module 5: Deep Dive into Seq2seq Models

Lessons:

- Comprehensive Overview of Seq2seq Models.
- Exploring the Architecture and Functionality of Seq2seq Models.
- Real-World Applications of Seq2seq Models.

Lab:

- Hands-on session: Working with Seq2seq Models.
- Interactive exercises: Exploring the applications of Seq2seq Models.

After completing this module, students will be able to:

- Understand the architecture and functionality of Seq2seq Models.
- Explore the real-world applications of Seq2seq Models.

Module 6: Exploring Hugging Face Transformer Pipelines

Lessons:

- Introduction to Hugging Face Transformer Pipelines.
- Exploring the Functionality and Implementation of Transformer Pipelines.
- Hands-on Experience with Hugging Face Transformer Pipelines.

Lab:

- Hands-on workshop: Implementing Hugging Face Transformer Pipelines.
- Interactive exercises: Working with Transformer Pipelines in AI tasks.

After completing this module, students will be able to:

- Understand the concept and functionality of Hugging Face Transformer Pipelines.
- Gain hands-on experience with Transformer Pipelines.

Module 7: LLM - Transfer Learning in NLP Lessons:

- Introduction to Transfer Learning in NLP.
- Exploring the Applications of Transfer Learning in NLP.
- Hands-on Experience with Transfer Learning in NLP.

Lab:

- Hands-on workshop: Implementing Transfer Learning in NLP.
- Interactive exercises: Working with Transfer Learning in practical

After completing this module, students will be able to:

- Understand the concept and application of Transfer Learning in NLP.
- Gain practical experience with Transfer Learning in NLP.

Module 8: GPT Fundamentals - GPT3.5 vs GPT 4

Lessons:

- Comprehensive Overview of GPT Fundamentals.
- Exploring the Differences between GPT3.5 and GPT4.
- Understanding the Advancements in GPT4.

Lab:

- Hands-on session: Working with GPT3.5 and GPT4.
- Interactive exercises: Exploring the advancements in GPT4.

After completing this module, students will be able to:

- Understand the fundamentals of GPT.
- Differentiate between GPT3.5 and GPT4.
- Explore the advancements and features of GPT4.

DETAILED CURRICULUM : MODULES

Module 9: ChatGPT and OpenAI API

Lessons:

- Introduction to ChatGPT and OpenAI API.
- Exploring the Functionality and Implementation of ChatGPT and OpenAI API.
- Hands-on Experience with ChatGPT and OpenAI API.

Lab:

- Hands-on workshop: Implementing ChatGPT and OpenAI API.
- Interactive exercises: Working with ChatGPT and OpenAI API in AI tasks.

After completing this module, students will be able to:

- Understand the concept and functionality of ChatGPT and OpenAI API.
- Gain hands-on experience with ChatGPT and OpenAI API.

Module 10: ChatGPT Clone in Google Colab and Streamlit

Lessons:

- Introduction to ChatGPT Clone in Google Colab and Streamlit.
- Exploring the Implementation of ChatGPT Clone.
- Hands-on Experience with ChatGPT Clone in Google Colab and Streamlit.

Lab:

- Hands-on workshop: Implementing ChatGPT Clone using Google Colab and Streamlit.
- Interactive exercises: Working with ChatGPT Clone in practical scenarios.

After completing this module, students will be able to:

- Understand and implement ChatGPT Clone using Google Colab and Streamlit.
- Gain practical experience with ChatGPT Clone.

Module 11: Introduction to Img2Img GenAI in NLP

Lessons:

- Overview of Img2Img GenAI.
- Introduction to Auto-Encoder Visualization.
- Understanding the Significance of Img2Img GenAI in AI.

Lab:

- Hands-on session: Exploring the basics of Img2Img GenAI.
- Interactive exercises: Working with Auto-Encoder visualization.

After completing this module, students will be able to:

- Understand the basic concepts of Img2Img GenAI.
- Gain insights into Auto-Encoder visualization.

Module 12: Exploring Variational Auto-Encoder

Lessons:

- Introduction to Variational Auto-Encoder.
- Exploring the Applications of Variational Auto-Encoder.
- Hands-on Experience with Variational Auto-Encoder.

Lab:

- Hands-on workshop: Working with Variational Auto-Encoder.
- Interactive exercises: Experimenting with various Variational Auto-Encoder.

After completing this module, students will be able to:

- Understand the concept and application of Variational Auto-Encoder.
- Gain hands-on experience with Variational Auto-Encoder.

DETAILED CURRICULUM : MODULES

Module 13: Coding AE in Keras

Lessons:

- Introduction to Coding AE in Keras.
- Exploring the Implementation of AE in Keras.
- Hands-on Experience with Coding AE in Keras.

Lab:

- Hands-on workshop: Implementing AE using Keras.
- Interactive exercises: Working with AE in practical scenarios.

After completing this module, students will be able to:

- Understand and implement AE using Keras.
- Gain practical experience with coding AE in Keras.

Module 14: Training GANs

Lessons:

- Comprehensive Overview of Training GANs.
- Exploring the Architecture and Functionality of GANs.
- Real-World Applications of Training GANs.

Lab:

- Hands-on session: Working with Training GANs.
- Interactive exercises: Exploring the applications of Training GANs.

After completing this module, students will be able to:

- Understand the architecture and functionality of Training GANs.
- Explore the real-world applications of Training GANs.

Module 15: Introduction to Multimodal GenAI

Lessons:

- Introduction to Multimodal GenAI.
- Exploring Multimodal Txt2Img Generation.
- Understanding Latent Diffusion Models.

Lab:

- Hands-on workshop: Implementing Multimodal GenAI.
- Interactive exercises: Working with Multi-modal Txt2Img Generation and Latent Diffusion Models.

After completing this module, students will be able to:

- Understand the concept and functionality of Multimodal GenAI.
- Gain hands-on experience with Multi-modal Txt2Img Generation and Latent Diffusion Models.

Module 16: Exploring CLIP drop and Stable

Diffusion Lessons:

- Introduction to CLIP drop and Stable Diffusion.
- Exploring the Applications of CLIP drop and Stable Diffusion.
- Hands-on Experience with CLIP drop and Stable Diffusion.

Lab:

- Hands-on workshop: Implementing CLIP drop and Stable Diffusion.
- Interactive exercises: Working with CLIP drop and Stable Diffusion in practical scenarios.

After completing this module, students will be able to:

- Understand the concept and application of CLIP drop and Stable Diffusion.
- Gain practical experience with CLIP drop and Stable Diffusion.

DETAILED CURRICULUM : MODULES

Module 17: LeonardoAI, Midjourney, and OpenAPI - Dall-E3

Lessons:

- Comprehensive Overview of LeonardoAI, Midjourney, and OpenAPI - Dall-E3.
- Exploring the Architecture and Functionality of LeonardoAI, Midjourney, and OpenAPI - Dall-E3.
- Real-World Applications of LeonardoAI, Midjourney, and OpenAPI - Dall-E3.

Lab:

- Hands-on session: Working with LeonardoAI, Midjourney, and OpenAPI - Dall-E3.
- Interactive exercises: Exploring the applications of LeonardoAI, Midjourney, and OpenAPI - Dall-E3.

After completing this module, students will be able to:

- Understand the architecture and functionality of LeonardoAI, Midjourney, and OpenAPI - Dall-E3.
- Explore the real-world applications of LeonardoAI, Midjourney, and OpenAPI - Dall-E3.

Module 18: Txt2Voice Generation - Evenlabs

Lessons:

- Introduction to Txt2Voice Generation - Evenlabs.
- Exploring the Functionality and Implementation of Txt2Voice Generation - Evenlabs.
- Hands-on Experience with Txt2Voice Generation - Evenlabs.

Lab:

- Hands-on workshop: Implementing Txt2Voice Generation - Evenlabs.
- Interactive exercises: Working with Txt2Voice Generation - Evenlabs in AI tasks.

After completing this module, students will be able to:

- Understand the concept and functionality of Txt2Voice Generation - Evenlabs.
- Gain hands-on experience with Txt2Voice Generation - Evenlabs.

Module 19: Introduction to PaLM 2

Lessons:

- Overview of PaLM 2.
- Introduction to Pathway Language Model Journey.
- Understanding the Significance of PaLM 2 in AI.

Lab:

- Hands-on session: Exploring the basics of PaLM 2.
- Interactive exercises: Working with Pathway Language Model Journey.

After completing this module, students will be able to:

- Understand the basic concepts of PaLM 2.
- Gain insights into Pathway Language Model Journey.

Module 20: Compute Optimal Scaling and Model Architecture Diffusion

Lessons:

- Introduction to Compute Optimal Scaling and Model Architecture.
- Exploring the Applications of Compute Optimal Scaling and Model Architecture.
- Hands-on Experience with Compute Optimal Scaling and Model Architecture.

Lab:

- Hands-on workshop: Working with Compute Optimal Scaling and Model Architecture.
- Interactive exercises: Experimenting with various Compute Optimal Scaling and Model Architecture.

After completing this module, students will be able to:

- Understand the concept and application of Compute Optimal Scaling and Model Architecture.
- Gain hands-on experience with Compute Optimal Scaling and Model Architecture.

DETAILED CURRICULUM : MODULES

Module 21: Exploring Bard and PaLM API

Lessons:

- Introduction to Bard and PaLM API.
- Exploring the Applications of Bard and PaLM API.
- Hands-on Experience with Bard and PaLM API.

Lab:

- Hands-on workshop: Implementing Bard and PaLM API.
- Interactive exercises: Working with Bard and PaLM API in practical scenarios.

After completing this module, students will be able to:

- Understand the concept and application of Bard and PaLM API.
- Gain practical experience with Bard and PaLM API.

Module 22: PaLM API in Vertex AI

Lessons:

- Introduction to PaLM API in Vertex AI.
- Exploring the Applications of PaLM API in Vertex AI.
- Hands-on Experience with PaLM API in Vertex AI.

Lab:

- Hands-on workshop: Implementing PaLM API in Vertex AI.
- Interactive exercises: Working with PaLM API in Vertex AI in practical scenarios. tasks.

After completing this module, students will be able to:

- Understand the concept and application of PaLM API in Ver
- Gain practical experience with PaLM API in Vertex AI.

Module 23: Introduction to MakerSuite

Lessons:

- Overview of MakerSuite.
- Introduction to the functionalities of MakerSuite.
- Understanding the Significance of MakerSuite in AI.

Lab:

- Hands-on session: Exploring the basics of MakerSuite.
- Interactive exercises: Working with various functionalities of MakerSuite.

After completing this module, students will be able to:

- Understand the basic concepts of MakerSuite.
- Gain insights into the functionalities of MakerSuite.

Module 24: MakerSuite Advanced Features

Lessons:

- Introduction to Advanced Features of MakerSuite.
- Exploring the Applications of Advanced Features in MakerSuite.
- Hands-on Experience with Advanced Features of MakerSuite.

Lab:

- Hands-on workshop: Working with Advanced Features in MakerSuite.
- Interactive exercises: Experimenting with various Advanced Features in MakerSuite.

After completing this module, students will be able to:

- Understand the concept and application of Advanced Features in MakerSuite.
- Gain hands-on experience with Advanced Features in MakerSuite.

Cognixia USPs

- LIFETIME LMS ACCESS
- 24 x 7 SUPPORT
- REAL-LIFE PROJECTS & CASE STUDIES
- INDUSTRY EXPERTS AS TRAINERS
- INDUSTRY STANDARD CERTIFICATE

POTENTIAL CAREER OPTIONS

- CHATGPT PROMPT ENGINEER
- AI ENGINEER
- MACHINE LEARNING ENGINEER
- DATA SCIENTIST
- SOFTWAE DEVELOPER

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