

The top left corner of the slide features several overlapping geometric shapes. There is a large orange-to-red gradient rectangle, a smaller dark blue triangle, and a larger dark blue hexagon. These shapes are partially cut off by the top and left edges of the frame.

# Deep Dive Module 6

# Deep Dive

## LLM Pre-training and Fine-Tuning

- ❑ Empowering Language Models: Pre-training, Fine-Tuning, and In-Context Learning  
<https://medium.com/@bijit211987/the-evolution-of-language-models-pre-training-fine-tuning-and-in-context-learning-b63d4c161e49>
- ❑ Fine-Tuning for Domain Adaptation in NLP  
<https://towardsdatascience.com/fine-tuning-for-domain-adaptation-in-nlp-c47def356fd6>
- ❑ A Comprehensive Guide to Fine-Tuning Large Language Models  
<https://www.analyticsvidhya.com/blog/2023/08/fine-tuning-large-language-models/>
- ❑ Pre-trained Language Models and their Applications  
<https://www.sciencedirect.com/science/article/pii/S2095809922006324>

# Deep Dive

## Transformers

- ❑ Transformer Neural Networks, ChatGPT's foundation  
<https://youtu.be/zxQyTK8quyY?si=NaoFOT35R3rIJ0fL>
- ❑ Large Language Models (LLM): Difference between GPT-3 & BERT  
<https://medium.com/bright-ml/nlp-deep-learning-models-difference-between-bert-gpt-3-f273e67597d7>
- ❑ What's the difference between Self-Attention and Attention in Transformer Architecture?  
<https://medium.com/mlearning-ai/whats-the-difference-between-self-attention-and-attention-in-transformer-architecture-3780404382f3>
- ❑ How to use the Hugging Face Transformers Library  
<https://www.youtube.com/watch?v=zydauf0KrEc>

# شكراً لكم

# Thank you



**SDAIA**

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