Day 11/32 (30 OCT 2024)

- **Some UI**
    - Streamlit
    - Gradio
    - ..

- **BIG TOPIC # 01** - Detailed Understanding <mark>Transformers</mark>
    - Attention mechanism
    - Causal attention in GPTs

    - Extending single-head attention to multi-head attention (why)
    - Various attention models
    - Overview on Transformer <mark>training</mark> process
        - GPTs
        - BERT
    - Fine Tuning LLM
        - Process
        - Code
        - Train
        - Evaluate
    - Optimization
        - PEFT, LoRA
        - Quantization
        - RLHF **

- **BIG TOPIC # 02** - Image Synthesis
    - Example demo
    - Auto Encoders
    - VAEs
    - GANs

- **BIG TOPIC # 03** - Prompts and applications
    - OpenAI LLM

- Emb, vector databases
- RAG and Advanced RAG
- Prompts, managing responses, function calling etc
- LlamaIndex//LangChain

- **On 6th Nov - 3rd MCQ** (12:45pm to 1:30pm)

Topics for today
- managing responses from LLMs
- Image Synthesis (simple example)
- Auto encoder - basics