Tentative schedule for Generative AI 2025

W3	Introduction to Generative models+ tools Git, Python, Huggingface, google colabs. Introduction https://www.youtube.com/watch?v=zjkBMFhNj_g + Innovation and startups
W4	Intro to Transformers https://arena3-chapter1-transformer-interp.streamlit.app/[1.1]_Transformer_from_Scratch + Understanding language models with NanoGPT
W5	Large language models, Practice: NanoGPT https://github.com/karpathy/nanoGPT
W6	Large language model, principles, evaluation, ethics. + Interacting with LLMs. prompting, CoT, and other tools. Ollama, llama.cpp, run a local LLM
W7	Large language models and Langchain +Retrieval Augmented Generation
W8	Large language models and vector databases, Practice: movie recommender system from text, https://github.com/weaviate-tutorials/awesome-moviate
W9	Part 1: LLMops Part 2: LLMops with use case from UiT
W10	Generative AI in Life Sciences / Alphafold
W11	Fine-tuning models with LoRa + Whisper and speech to text
W12	Foundation models, self-supervised learning and latent representation , inside the AI brain + course project brainstorming and making teams
W13	Generative AI for images Stable diffusion (introduction, VAE, CLIP) CLIP: https://dataflowr.github.io/website/modules/19-clip/
W14	Theory behind diffusion models + programming the vanilla diffusion model from scratch on Pytorch Introduction to the Diffusers library from Huggingface to implement advanced SOTA diffusion models
W15	Teams project time
W16 & W17	Easter break
W18	Generative AI for videos or multimodal Generative AI https://magazine.sebastianraschka.com/p/understanding-multimodal-llms + Reasoning and AGI
W19	Project work + Generative image and video practice with Tromsø artists, Comfi.ui