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 in AI	Benjamin Ricaud + Erlend K Liabø Gabrielsen
W4	Intro to Transformers https://arena3-chapter1-transformer-interp.streamlit.app/[1.1]_Transformer_from_Scratch + Understanding language models with NanoGPT + Access to GPU/tutorial including small startup example	Helge Fredriksen + Daniel Kaiser (exercises)
W5	Large language models, Practice: NanoGPT https://github.com/karpathy/nanoGPT + text generation web UI + LMstudio	Daniel Kaiser
W6	Interacting with LLMs through basic and advanced prompting methodologies.	Mussarat Hussain
W7	Retrieval Augmented Generation + Large language models and vector databases, Practice: movie recommender system from text, https://github.com/weaviate-tutorials/awesome-moviate	Erland Grimstad
W8	Large language model, principles, evaluation, ethics. Explain paper on evaluation of LLMs + ethics by PhD students (ex: stochastic parrot) + short overview of AI ethics	PhD students + Benjamin
W9	Part 1: LLMops + Ollama, llama.cpp, run a local LLM ? Part 2: LLMops with use case from UiT	Part 1: Erland Grimstad Part 2: Øysten Tveito (tbc)
W10	Course project brainstorming and making teams	
W11	Fine-tuning models with LoRa + Whisper and speech to text	Tor-Arne Nordmo Tetiana Lutchyn
W12	Foundation models, self-supervised learning and latent representation , inside the AI brain + course project brainstorming and making teams	Benjamin Ricaud or Elisabeth Wetzer
W13	Generative AI for images Stable diffusion (introduction, VAE, CLIP) CLIP: https://dataflowr.github.io/website/modules/19-clip/	Kristoffer Wickstrøm
W14	Theory behind diffusion models + programming the vanilla diffusion model from scratch on Pytorch	Filippo Bianchi

	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	Benjamin Ricaud + ??
W19	Project work + Generative image and video practice with Tromsø artists Tvibit , Comfi.ui	