**A HANDS-ON WORKSHOP WITH GOOGLE GEMMA, LANGCHIAN, GROQ & HUGGING FACE**

**https://www.youtube.com/watch?v=Bp1XyvMvedg&t=6984s**

**1- Create Gemini API key from GEMINI AI STUDIO & save it for further practice**

**https://aistudio.google.com/app/apikey**

**2- Introduce about Google free open source llm model Gemma2 trained with 9B & 27 B**

**3- Hugging face - login - setting - Access token - create HF\_TOKEN**

**4- Hugging face - models - gemma 9b parameter - save then model (google/gemma-2-9b-it )**

**A screenshot of a computer

Description automatically generated**

**5- groq introduction - groq cloud - save the gemma model using -- gemma2-9b-itA screenshot of a computer

Description automatically generated**

**6- PRACTICLE:1 🡪 GEMMA MODEL INTEGRATE WITH HUGGING FACE**

**https://github.com/huggingface/transformers**

**7- PRACTICLE:2 🡪 GEMM MODEL INTEGRATE WITH LANGCHAIN, HUGGING FACE & GROQ**

**8- PREVIOUS YOUTUBE VIDEOS🡪**