

Generative AI

a short but thorough and hands-on introduction

Bo Kang, Thomas Demeester, Tijl De Bie

Outline

- Text Generation (LLMs) (Thomas, 13 Oct. 2023)
- Tools and Applications in Text Generation (Bo, 27 Oct. 2023)
- Image Generation (Bo, 10 Nov. 2023)
- Audio Generation (Bo, 17 Nov. 2023)
- Ethical Considerations and Trustworthiness (Tijl, 01 Dec. 2023)
- Case Presentation (You, 08 Dec. 2023)

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Ask Helpdesk with Retrieval Augmented Generation

Chat

Readme

+ New Chat



User

How to set up a VPN?

04:18:31 PM

Chatbot

To set up a VPN connection at Ghent University, you need to follow these steps:

04:18:45 PM

1. Install a VPN client program on your device.
2. Once the VPN client is installed, connect to the VPN service using the appropriate credentials (e.g., account and password) provided by Ghent University.
3. Ensure that you have the correct settings configured for the VPN connection (e.g., server address and protocol).
4. Connect to the VPN service using the VPN client.
5. Verify that you are able to access the university's internal information and resources that require a VPN connection.

Note that if you are connecting to the VPN service from outside of the university network, you may need to use a different VPN client program than the one used by the university. Additionally, not all features and services may be accessible through the VPN connection, especially if the service requires a physical connection to

Reference:

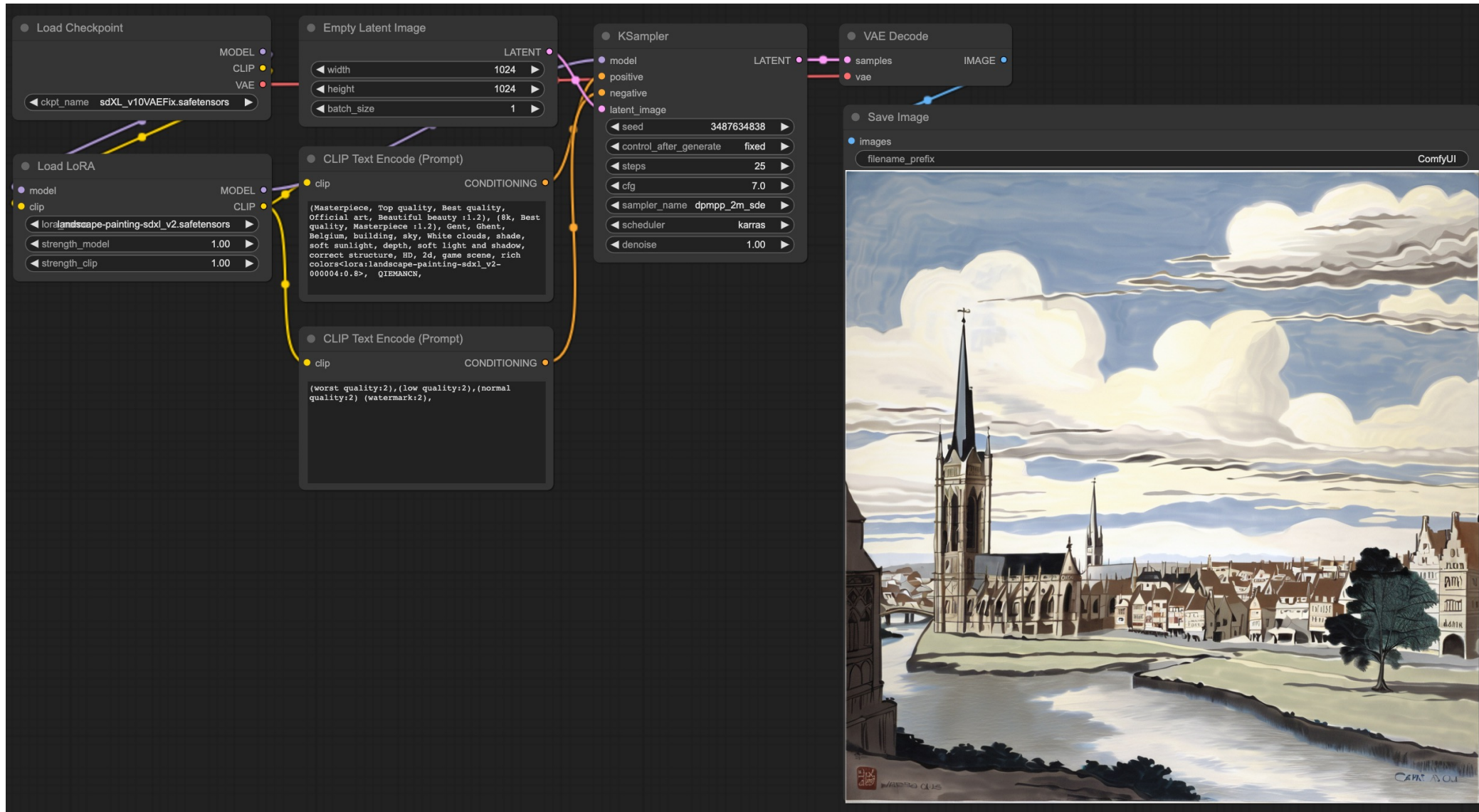
- <https://helpdesk.ugent.be/vpn/en/>
- <https://helpdesk.ugent.be/ugentnet/en/>
- <https://helpdesk.ugent.be/vpn/>
- <https://helpdesk.ugent.be/vpn/en/vpnb.php>
- <https://onderzoektips.ugent.be/en/tips/00001924/>



Type your message here...

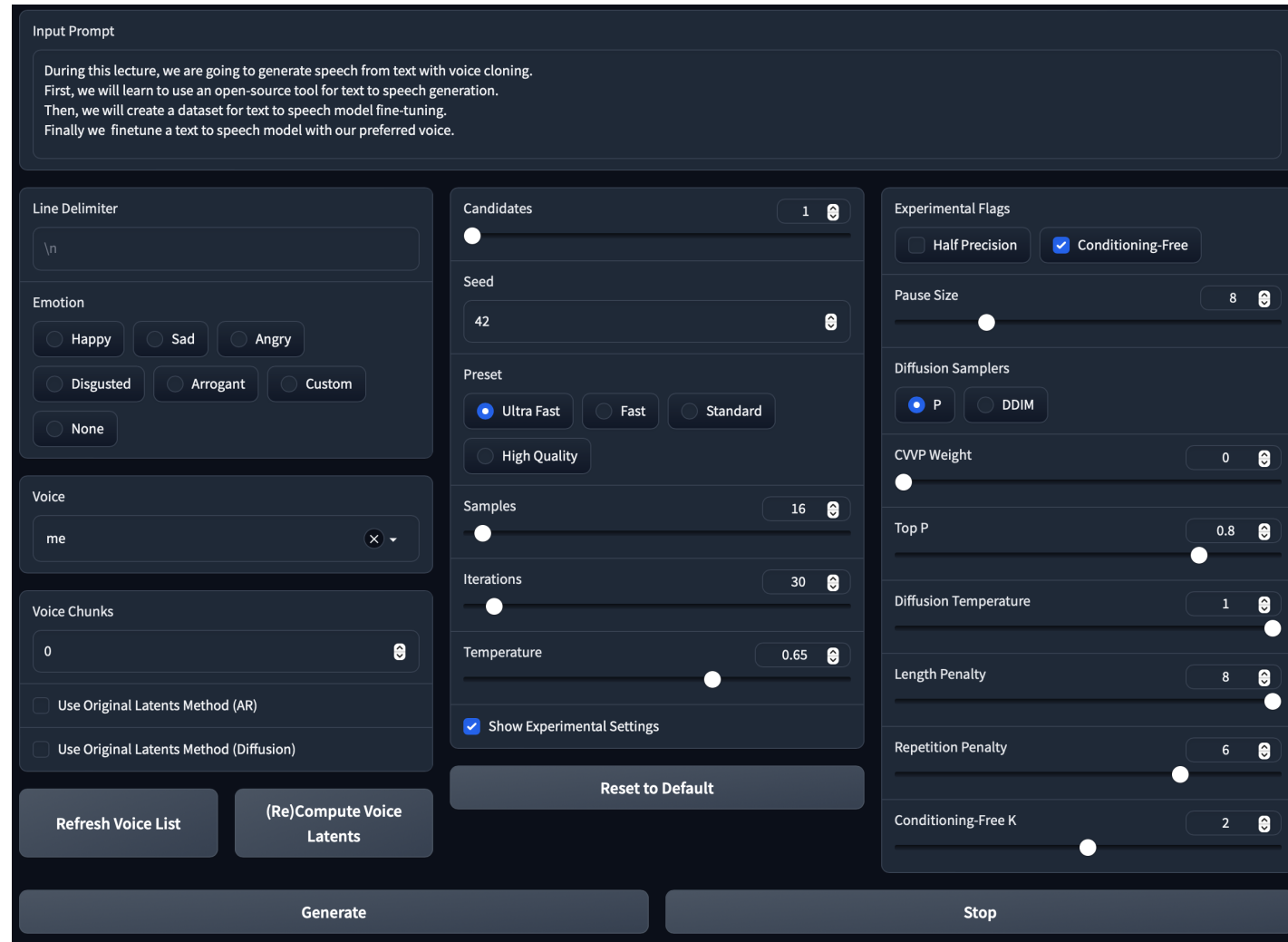


Generate images with you own style



Generate Speech from Text with Voice Cloning

- Use an open-source tool for text to speech generation
- Create a dataset for text to speech model finetuning
- Finetune text to speech model with preferred voice



The interface is a dark-themed web application for text-to-speech generation. It features a large text input area at the top for the prompt, followed by several control panels. The 'Line Delimiter' is set to '\n'. The 'Emotion' section has radio buttons for Happy, Sad, Angry, Disgusted, Arrogant, Custom, and None. The 'Voice' dropdown is set to 'me'. The 'Voice Chunks' is set to 0, with checkboxes for 'Use Original Latents Method (AR)' and 'Use Original Latents Method (Diffusion)'. The 'Candidates' panel shows 1 candidate, a seed of 42, and a preset of 'Ultra Fast'. The 'Samples' slider is at 16, 'Iterations' at 30, and 'Temperature' at 0.65. The 'Experimental Flags' panel has 'Half Precision' unchecked and 'Conditioning-Free' checked. The 'Diffusion Samplers' panel has 'P' selected over 'DDIM'. The 'CVVP Weight' slider is at 0. The 'Top P' slider is at 0.8. The 'Diffusion Temperature' slider is at 1. The 'Length Penalty' slider is at 8. The 'Repetition Penalty' slider is at 6. The 'Conditioning-Free K' slider is at 2. At the bottom, there are buttons for 'Refresh Voice List', '(Re)Compute Voice Latents', 'Reset to Default', 'Generate', and 'Stop'.

Input Prompt

During this lecture, we are going to generate speech from text with voice cloning.
First, we will learn to use an open-source tool for text to speech generation.
Then, we will create a dataset for text to speech model fine-tuning.
Finally we finetune a text to speech model with our preferred voice.

Line Delimiter

\n

Emotion

☐ Happy ☐ Sad ☐ Angry

☐ Disgusted ☐ Arrogant ☐ Custom

☐ None

Voice

me

Voice Chunks

0

☐ Use Original Latents Method (AR)

☐ Use Original Latents Method (Diffusion)

Candidates

1

Seed

42

Preset

☒ Ultra Fast ☐ Fast ☐ Standard

☐ High Quality

Samples

16

Iterations

30

Temperature

0.65

☒ Show Experimental Settings

Reset to Default

Experimental Flags

☐ Half Precision ☒ Conditioning-Free

Pause Size

8

Diffusion Samplers

☒ P ☐ DDIM

CVVP Weight

0

Top P

0.8

Diffusion Temperature

1

Length Penalty

8

Repetition Penalty

6

Conditioning-Free K

2

Generate

Stop

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Logistics

- Time: 16:15-17:30 on the Fridays
- Place: room Systems in building 125, technology campus Zwijnaarde
- GitHub repository: github.com/aida-ugent/generative-ai-course
- Registration form: forms.gle/c791QJkA2JCWSNWf6

