



Generative Al in Education

Al Art:

Exploring Creativity with Generative Tools

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Padlet KI-Tools

GenAl in Education



Padlet Digitale Tools für Unterricht, Lehre und Wissenschaft



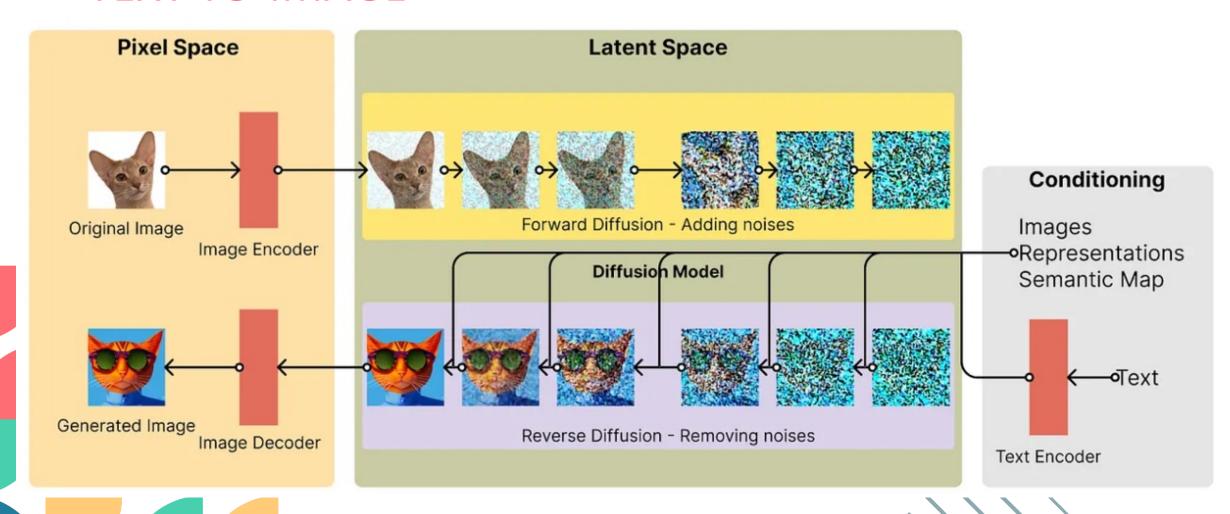
GENERATIVE IMAGE-AI: UNLEASH CREATIVE POTENTIAL

TEXT-TO-IMAGE

- Input:
 - Text description (Prompt)
- NLP Modell:
 - Understands the text description
 - Feature-Extraction: Identifies key elements
- Image Generation Models:
 - Generative Adversarial Networks (GANs): Use adversarial training between generator and discriminator
 - Diffusion: Use of noise and denoising processes for data generation.
 - Image generation: Creating the image based on key features
 - Fine tuning: optimisation of the image quality
- Output:
 - Generated Image



TEXT-TO-IMAGE



Awasthi, A. (2023) *Understanding the basics of stable diffusion: Generative AI, Medium*. Available at: https://medium.com/@ayushawasthi2409/understanding-the-basics-of-stable-diffusion-generative-ai-c860fc303031 (Accessed: 08 October 2024).

The most popular Tools

TOOLS

- Prompts
- Negative Prompts
- Technical jargon in the field of photography/film is an advantage
- https://padlet.com/aliciaba nkhofer/creating-imageswith-generative-aijvk7en4211219lzn















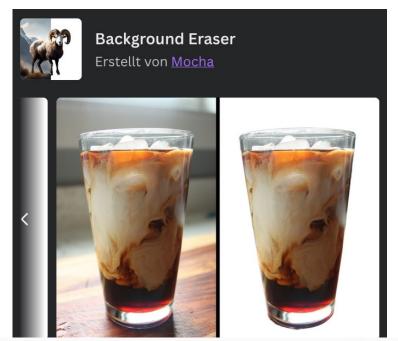






IN PRACTICE

- Generate images
- Remove background
- Style transfer
- Face modification
- Object recognition and segmentation
- Generative Fill





IN PRACTICE

Canva DALL-E



Photo Credit: Johannes Kepler Universität Linz

MAGIC GRAB





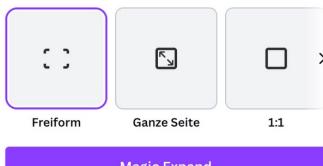
MAGIC EXPAND







Größe auswählen



Magic Expand

Bei Bildern mit Gesichtern, Händen oder transparentem Hintergrund kann die Erweiterung schwierig sein. Mehr erfahren.





HG-ENTFERNER



HG-Entferner



Photo Credit: Johannes Kepler Universität Linz

MAGIC EDIT

Magic Edit









die person hält einen strauß blumen in der hand

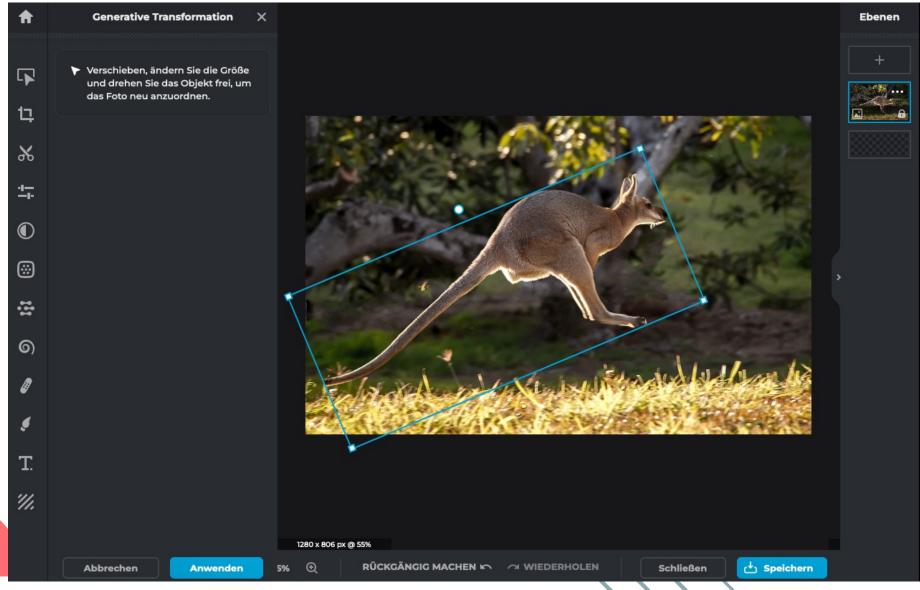
X Neu generieren

Diese neue Technologie wird ständig verbessert. Wenn mit diesen Bildern etwas nicht stimmt, dann <u>melde das</u> <u>bitte</u>.



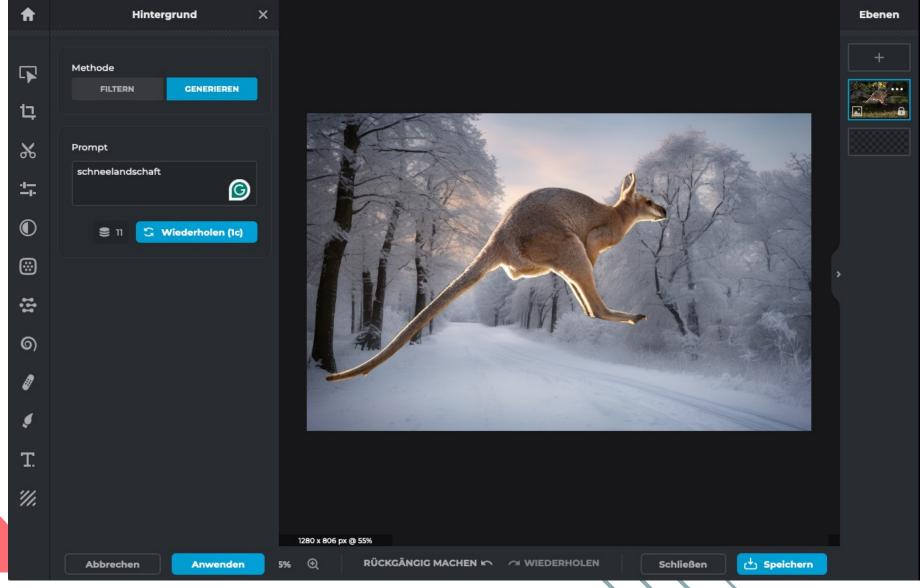
ALTERNATIVE





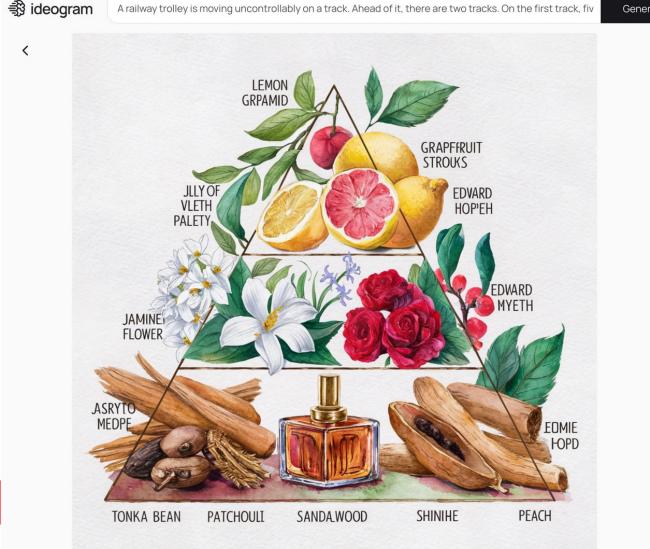
ALTERNATIVE





TEXT-TO-IMAGE





Generate

Upgrade plan









... 1 ♡





















Prompt



A captivating watercolor illustration of a triangular pyramid, representing a perfume shop. The bottom section contains tonka bean, patchouli and sandalwood. The middle section features jasmine flower, red rose, lily of valley and peach. The top section represents lemon, grapefruit and leaves. All elements are elegantly illustrated. The artwork employs acrylic medium with a mix of palette knife and brush strokes, drawing inspiration from the styles of Makoto Shinkai, Jamie Wyeth, James Gilleard, Edward Hopper, and Greg Rutkowski. The image evokes a sense of Studio Ghibli and Genshin Impact aesthetics, making it a trending piece on Pixiv Fanbox.

Model

Dimension

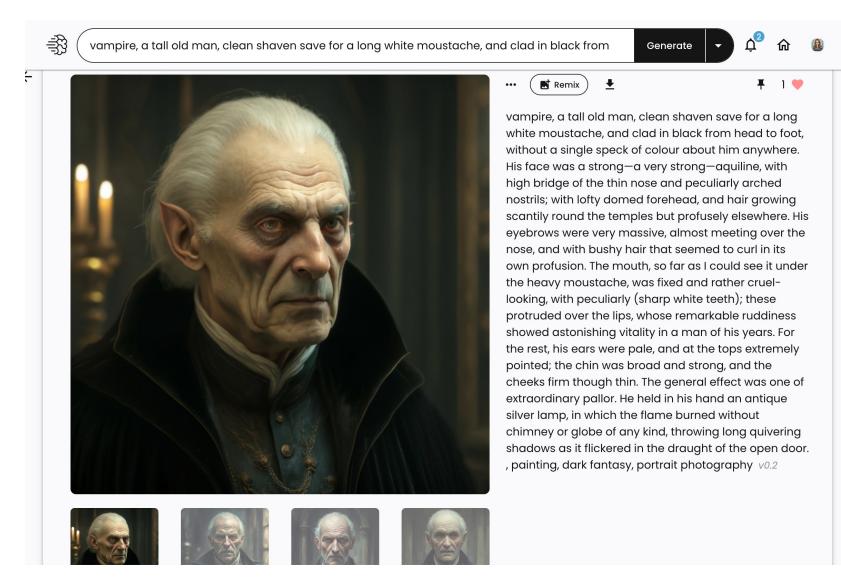
Ideogram 1.0

1:1.1024 x 1024

VISUALIZE BOOK CHARACTERS

- with Ideogram
- e.g. the description of Bram Stoker's Dracula

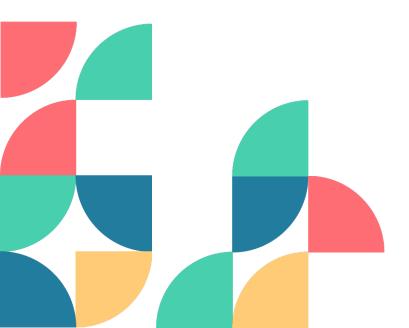




Padlet Alicia Bankhofer



PROBLEMS



- Quality of the generated images
- Bias and discrimination
 - Bias in the training data
 - Produce discriminatory or stereotypical results
- Privacy and security
- Lack of control over the results
- Copyright issues
 - do the images contain / are they based on copyrighted content
- Abuse and manipulation
 - Creation of fake images
 - Dissemination of misinformation
- Lack of Transparency and explainability
 - "Black Box" => decisions and mode of operation difficult to understand or explain
 - Leads to trust problems and ambiguity

- Which images are used for training?
 - Not comprehensible for many tools
- Adobe Firefly
 - uses Adobe Stock Images
 - Good for users
 - Metadata etc. are integrated
 - bad for artists who have uploaded images to Adobe Stock



AI IN AUDIO AND VIDEO: FROM TEXT TO MULTIMEDIA

AUDIO AND VIDEO



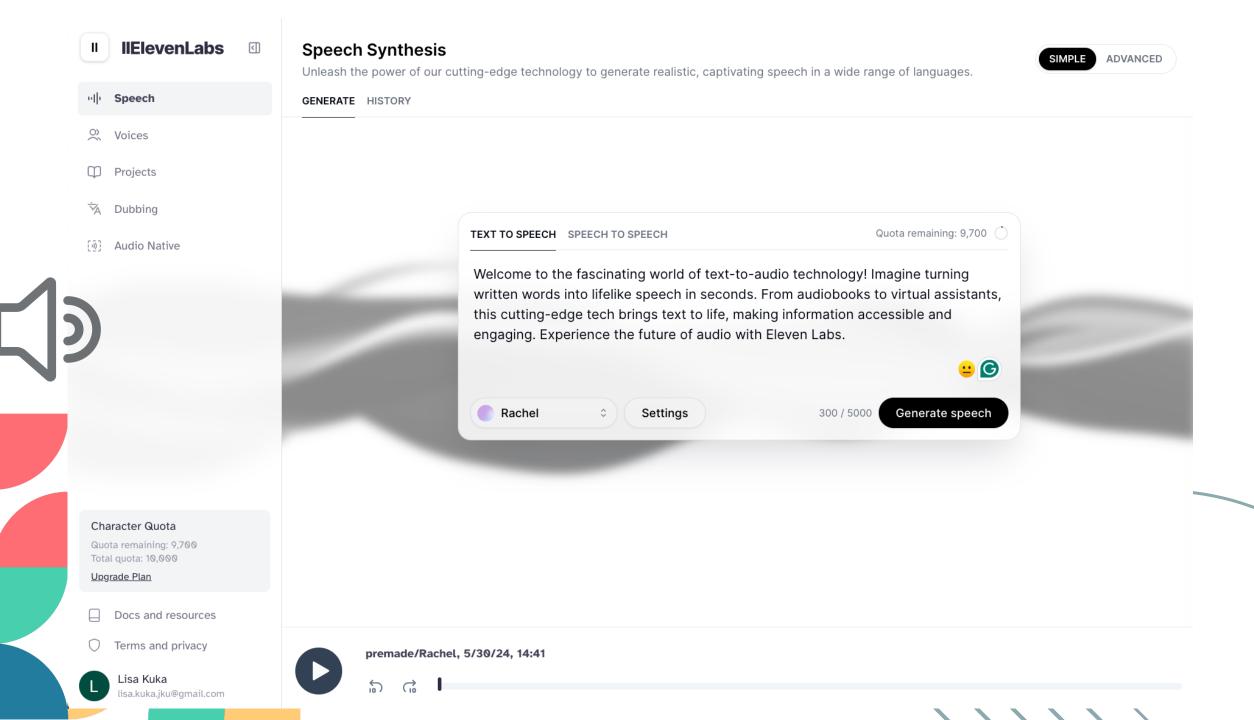






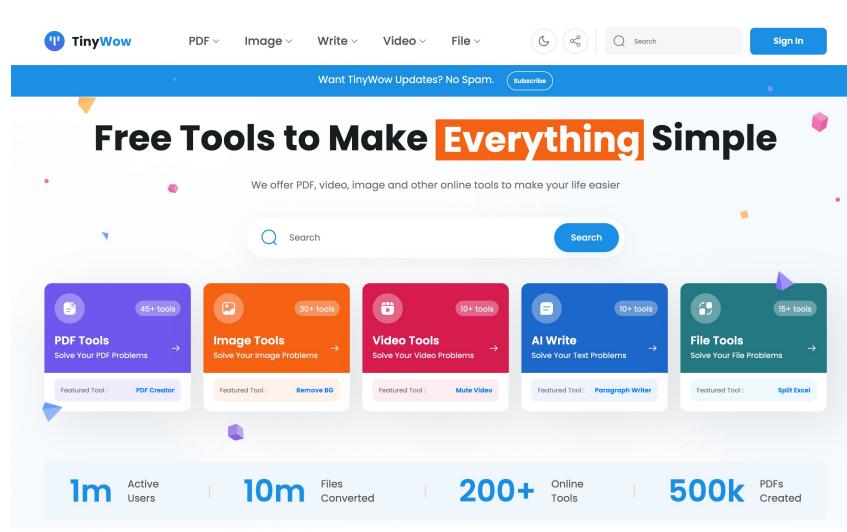
4 Suno udio

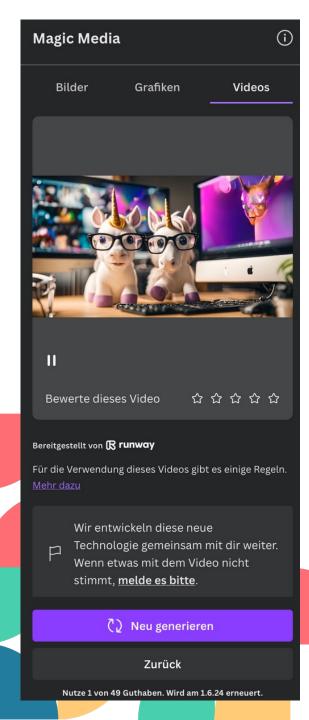




Audio Transcripts with TINYWOW

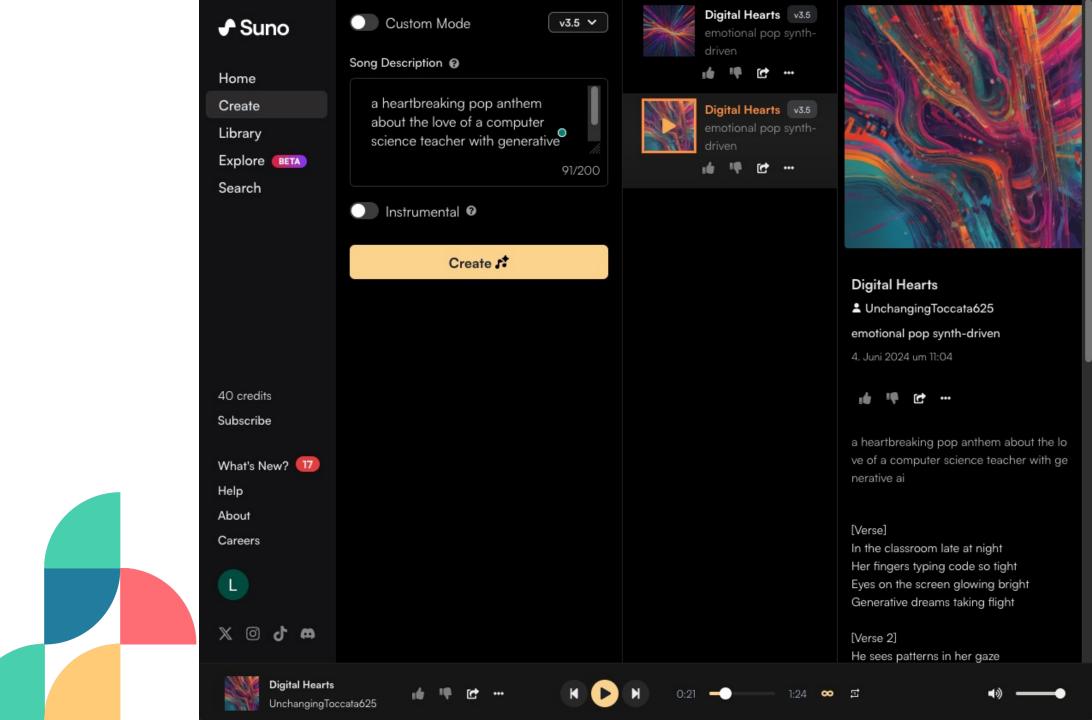


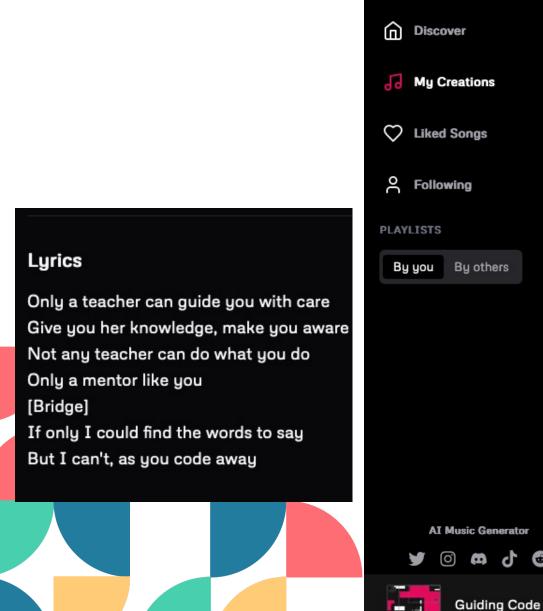




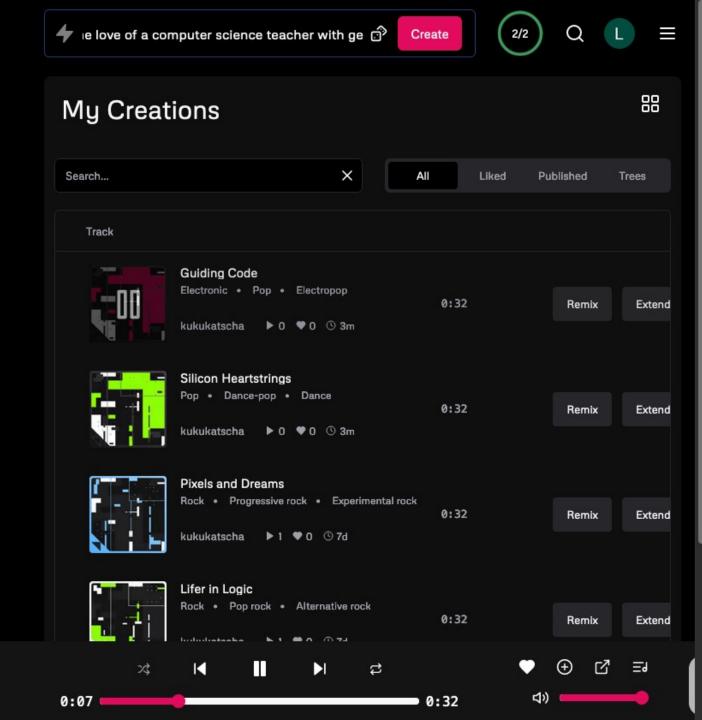


Canva





udio beta



TASK

Develop teaching materials with Ideogram and ElevenLabs

Task:

• Build on your lesson plan and create the first teaching materials, initially in text form, and then supplement them with visual and audio content using **Ideogram** and **ElevenLabs**.

Approach:

- Use **ChatGPT** to create a script or handout for your lesson that summarises the most important points of your topic. Make sure the text is concise and easy to understand.
- Use **Ideogram** to create appropriate infographics, diagrams or illustrations that visually support the complex content. These should help learners to better understand the context.
- Use **ElevenLabs** to create a short audio file that serves, for example, as an introduction to the topic or provides a narrative of a particular issue.





Create exam ideas and quizzes with ChatGPT and other GenAI tools

Task:

• Develop ideas on how to check learners' understanding of the complex topic and create quizzes, tests or other interactive assessment formats.

Approach:

- Think of at least three different ways to check learners' understanding (e.g. quizzes, short tests, group projects, discussions).
- Use ChatGPT to create a quiz with multiple choice, short answer or scenario-based questions. Make sure the questions focus on both comprehension and application.
- Use other tools (e.g. Kahoot, Quizlet) to create interactive learning games or exercises that you can use in class to reinforce what students have learnt.

Tipp: Many tools offer the option of uploading Excel sheets with a template.

What challenges are we facing?

Legal

Who is the copyright holder?

Plagiarism

Cheating

Hallucination

Deskilling

What challenges are we facing?

DeepFakes

Lack of motivation among students

Question of Meaningfulness e.g. Homework



