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My First Short Film Using Al





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<u>Toronto Data Professionals Community (TDPC)</u>, one of the largest data professional's community in Toronto, host monthly event which offers interactive learning built by community and guided by trusted data experts.

TDPC Event Partners







Agenda

- -- Creating Prompts
- --Reading Prompts
- -- Creating images from Prompts
- -- A short film from the above

Creating prompts, images, as well as reading prompts are important steps in generating short films using AI Services.



Disclaimer

Demo examples:

- Today's example is about "Teapot"
- Cross join images/information/human/culture/objects
- Colors, Pink Dog, pink 7-Up drink
- Inaccurate information, Cat = Dog, Spellings, Fonts
- Inaccuracy images of Human/Culture/Objects





Project/Goals

- 1. Make a short film using Al
- 2. Free version **
- 3. On My laptop only **
- 4. Target Audiences
- 5. Simplicity / Short
- 6. Coding / Scripting
- 7. Hands-on
- 8. API calls
- 9. Replacing Al Tools (Code)
- 10. Future milestone (Version 2)



Target Audiences

- Students (Software, Technology, ...)
- Developers (Python, ...)
- Social media (Facebook, YouTube, ...)
- Multimedia (Small companies, Sales, ...)
- Influencers





Step-by-Step Solution

- 1. Generate Prompts (Texts)
- 2. Text-to-Speech
 - Accents
 - Frequency / Tone of voice
- 3. Text-to-Images
 - Animation on Images
 - Effects (Color, Shades, 3D, ...)
- 4. Generate Video





Best practice for Al Prompts

Clarify your goal: Achievement, Audience, Action,...

Give Clear Instruction: Outcome, Be Specific, Simple,...

Proofread your prompt: grammar, spelling, contextual, ...

Describe your goal output: Specify Output, Table, email, list ...

Include Keywords phrases: Provide Keywords or phrases, help SEO (Search engine optimization)...

Describe the audience and style: Tell Al who you are talking to, Tone, technical writer, ...

Ask for special formatting: Table format, Excel, Step-by-step, ...

Provide source material or examples: Facts, Details, Scripts, code, sample data, ...

As for opinions: What do you think AI? What would you do?

Revise: Try again, optimize, Check and double check...





Sample Prompt

f"Please write 5 unknown and interesting facts about {story}
make sure it is written as if it is going to be used for an advertisement.

I want to make a TikTok video from the facts and I want it to be appealing and interesting to everyone.

Please give your answer in the below format and do not include any additional words:

- 1- <the first fact>
- 2- <the second fact>
- 3- <the third fact>
- 4- <the fourth fact>
- 5- <the fifth fact>.



Then For each of the facts you gave me, write three prompts I can give to an AI Image generator to generate an appealing image related to the fact. Please write them numbered from 6 to 20 and include no additional word and make sure every prompt starts with Generate an image that.

Also, do not use double quotation marks in your responses."



Generate Prompts

- 1- The teapot was invented in China during the Yuan Dynasty, around 700 years ago.
- 6- Generate an image that shows a traditional Chinese tea ceremony.
- 7- Generate an image that showcases the intricate design of a Chinese teapot.
- 8- Generate an image that features ancient Chinese pottery techniques.
- 2- In England during the 17th century, women would gather and drink tea from small porcelain cups without handles.
- 9- Generate an image that depicts English women socializing over tea.
- 10 -Generate an image that highlights a beautiful set of fine porcelain tea cups.
- 11 -Generate an image that illustrates how milk is added to British style teas.
- 3-The world's largest teapot is located in Chester, West Virginia. It stands at 14 feet tall and can hold up to 15
- 12 -Generate an image featuring large roadside attractions across America
- 13 -Generate an Image showcasing West Virginia landmarks
- 14 -Generate another version of the world's largest objects
- 4-During World War II, soldiers were issued "boilerplate" aluminum teapots which doubled as helmets in case of eme
- 15 Generate An Image Of A Military Combat Uniform And Helmet Combo With A Teapot Graphic Imposed On Top Or Beside
- 16 generate a retro poster showing US soldiers holding their helmet-teapots serving each other hot drinks at cam
- 17 generate An Image Of Historical US army regalia featuring "Tea Pot Helmets"
- 5-In Morocco and some Middle Eastern countries , mint leaves are often added to green tea before pouring into glas
- 20-generate Images That Highlight Traditional Middle Eastern Green Tea Drinking Customs .

18 - generate An Image That Showcases Tea Leaves Expanding Rapidly To Release Fresh Flavors And Scents Like Gun Po 19 - generate images featuring Moroccan ceramic designs used for serving traditional green mint teas

QL Saturday (#1004)

Text-To-Speech

```
payload = {
    "text": input_text,
    "voice": "lance",
    "quality": "medium",
    "output_format": "mp3",
    "speed": 1,
    "sample_rate": 24000
}
headers = {
    "accept": "text/event-stream",
    "content-type": "application/json",
    "AUTHORIZATION": "80bae7412814481da11ed81d06c14e2a",
    "X-USER-ID": "1TUfjtM1JLcGlwoscp8kT05qGLg2"
}
```

```
# Download the Audio file using the returned url
audio = requests.get(audio_url, allow_redirects=True)
print(audio.content)

# Path of the audio file
file_path = f"{story}/Audios/{file_name}.mp3"
# Check if the folder has been created or not
os.makedirs(os.path.dirname(file_path), exist_ok=True)
# Write the audio file and save it
open(file_path, 'wb').write(audio.content)
```

<u>Challenges</u>:

- Filler linguistics, Crutches (um, oo, ...)
- Delays / Overlap / Pause
 Missing end of sentences.



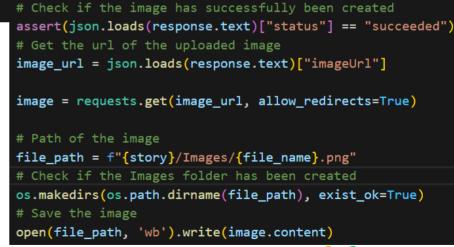
Text-To-Image

```
payload = {
    "model": "absolutereality_V16.safetensors [37db0fc3]",
    "upscale": True,
    "aspect_ratio": "portrait",
    # Negative prompt which contains the characteristics which images should not contain
    "negative_prompt": "badly drawn",
    # The given prompt to the image generator AI
    "prompt": input_prompt + """, realistic, detailed, dark background"""
```

<u>Challenges</u>:

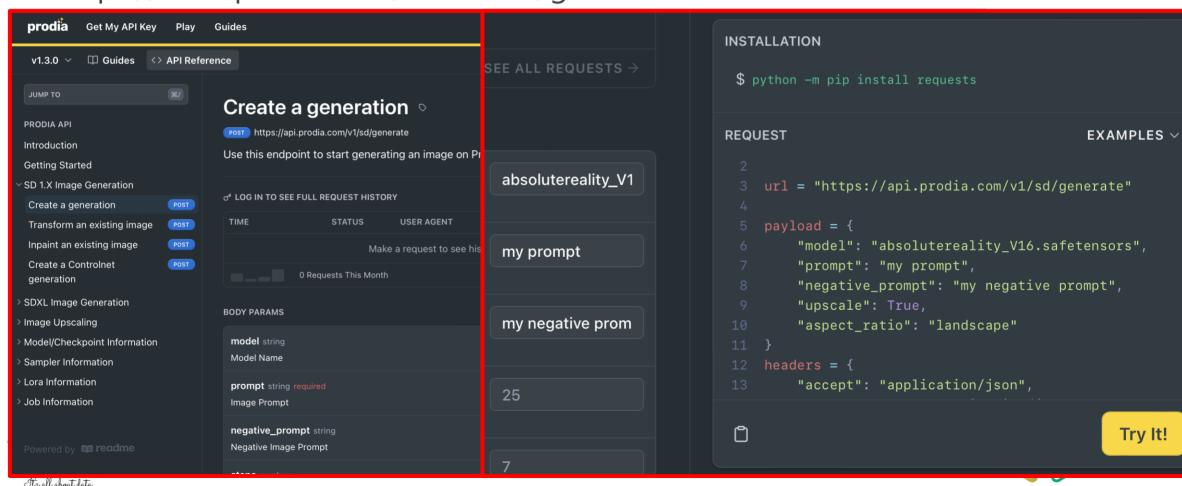
6 finger hands, fingernails, Text/Spelling.
 Negative prompt.

Image delay, status == "generating" or "queued".



Text-To-Image

https://docs.prodia.com/reference/generate



Generate Video

Aligning Images, voices, and duration.

- Solution A: Replicate images and concatenate them in accordance with the Audio's length.
- Solution B: Apply motion effect to Images using Al API.
- Solution C: Utilize movie creator Al API.





Add/Replace API Services

- Chat GPT ----> Google Bard
- Play.ht ----> Google TTS (Text-To-Speech AI)
- Midjourney Al ----> Stable Diffusion
- Replace all with one Al tool (Prompt to film)

<u>Challenges</u>:

API returns





Optimal Design

- Parameterize your notebook cells.
- Check for new and better API.
- Consistency in API return formats, Cast API return (JSON, Binary).
- Use a paid version of the AI service.
- Define a real scenario project.
- Create Validation Tools, (Capture Inappropriate content/images, Historical/Cultural accuracy).
- Configuration tables, Log the data, Train your AI (Very Advance)
- Run stats and reports on returns.
- Test, Test, Test.



How to run the python notebook

- -- Open file "010 Generate Al Scenario.ipynb"
- -- Modify the variable "story"
- -- Run all
- -- Open file "020 Merge Al Outputs.ipynb"
- -- Modify the variable "story"
- -- Run all

-- To rerun delete the main root folder.





Demo examples Teapot Computer Racing Car





Thank you for your time





Presenter(s) Content Only





Content Only



