TECH-A-THON 3.0

TEAM CODE ASSASSINS

DOMAIN:- DATA SCIENCE

Problem description:

Build a Deep learning or Machine learning based solution to generate image using text description.

Objective:

- We built a WebApp named " Da Vinci Effect " which takes input in the form of text and generates Image based on it.
- In this model we aim to trained images of 300+ categories
- We can easily generate image based on text within a minute.
- We use text embedding and recurrent neural network to classify the text and using conventional neural network to generate image based on text.

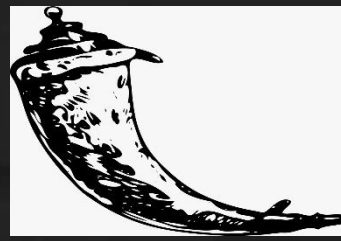
Idea solution details

- User provide input in the form of words or sentences to the webapp Da Vinci Effect and it automatically generates image based on it.
- We are using 300+ categories of images in the dataset for training our deep learning model.
- We use the text embedding and recurrent neural network and Gan to classify the text entered by the user and using CNN to generate the image based on the text.
- **We have also provided the Query section in our webapp so user can contact to our team through it.**
- We have used Google Colab for optimising the model and ngrok for hosting and Azure for dockerize our app Api.
- We are using Flask Framework for frontend, backend and Api integration.

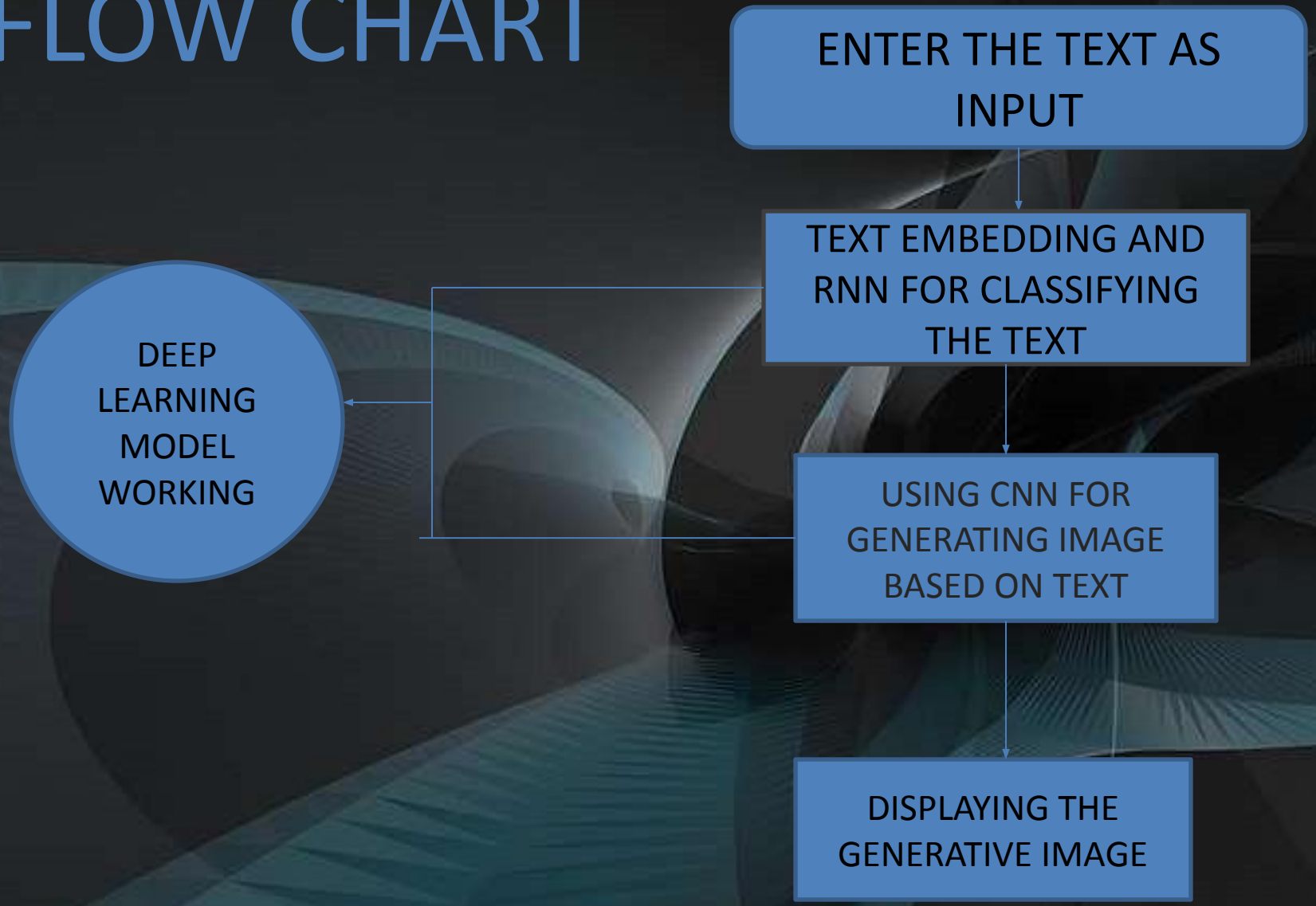
Technology Stack

- Flask Web Application framework
- Python3(Deep learning model Google Colab)
- Deep Learning model(CNN ,RNN, TEST EMBEDDING,GAN)
- Bootstrap ,Html /CSS ,java script ,
- GIT ,GitHub
- DOCKER,AZURE
- VIRTUAL ENV
- NGROK for hosting

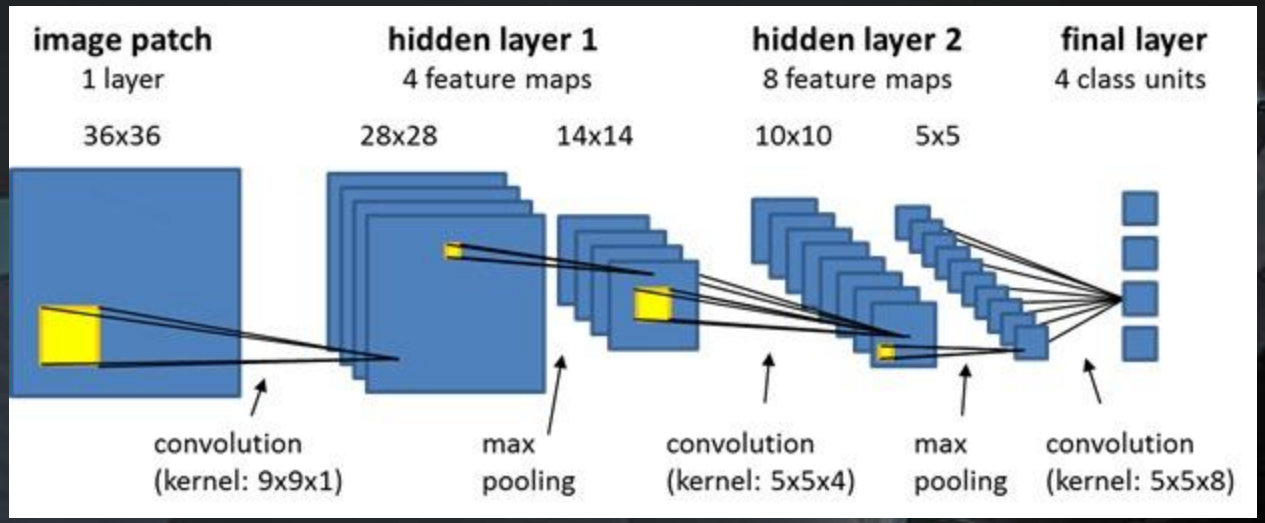
ngrok



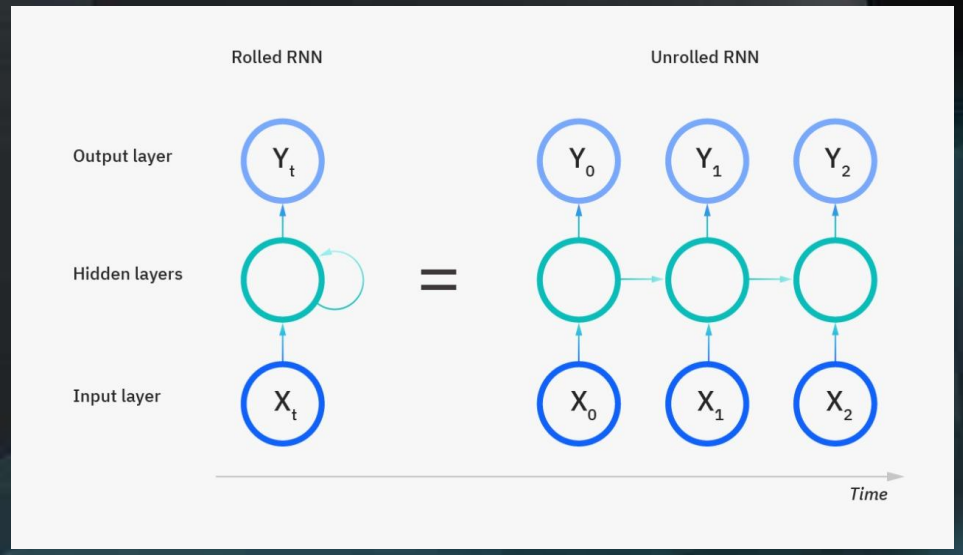
FLOW CHART


ENTER THE TEXT AS INPUT
TEXT EMBEDDING AND RNN FOR CLASSIFYING THE TEXT
USING CNN FOR GENERATING IMAGE BASED ON TEXT
DISPLAYING THE GENERATIVE IMAGE
DEEP LEARNING MODEL WORKING

WEBSITE CONFIGURATION



CNN MODEL



RNN MODEL

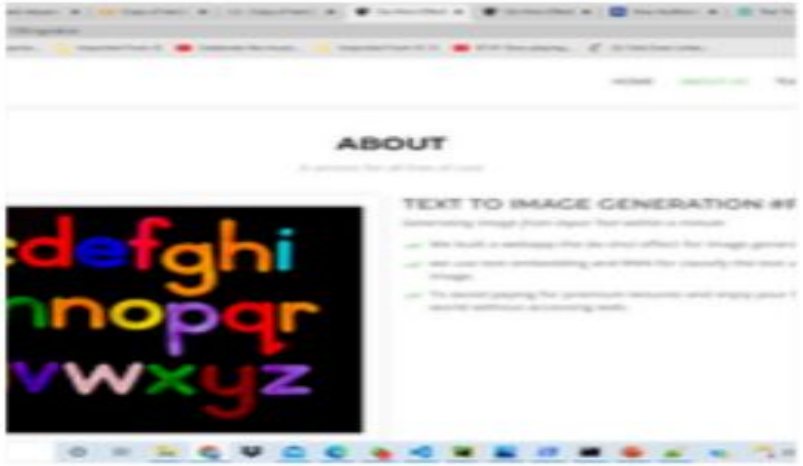
logit_scale: 100.0
Diffusion
settingsbeta_schedule:
"squaredcos_cap_v2“
n_timesteps: 1000
Architecturesettings
image_size: 64patch_size:4
n_vocab:65536
max_text_len: 77
n_embd: 512
n_head_state_text: 64
n_head_text: 8
n_xf_blocks_text: 12
n_head_state_image: 64
n_head_image: 12
n_xf_blocks_image: 12

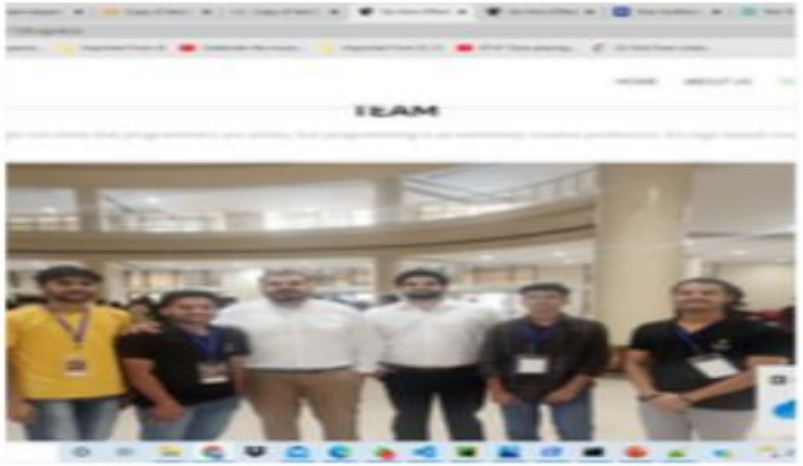
Advantages

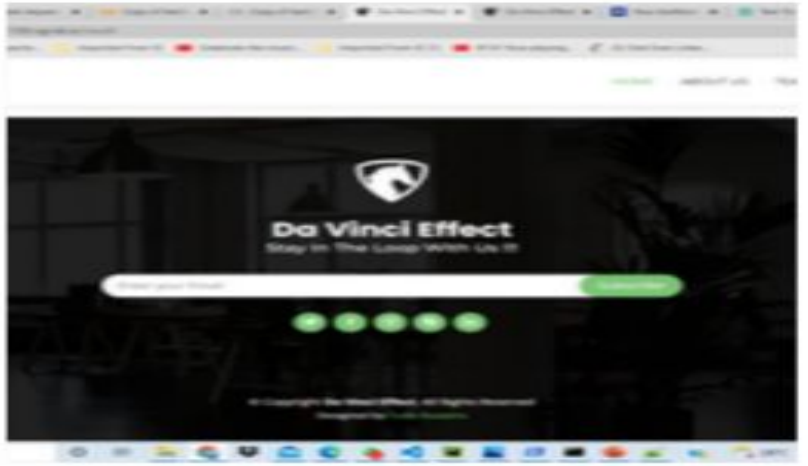
- Using text to image generating in social media
- To generate creative content
- It can provide graphics requirement on many companies
- It take very less time for generating image based on text

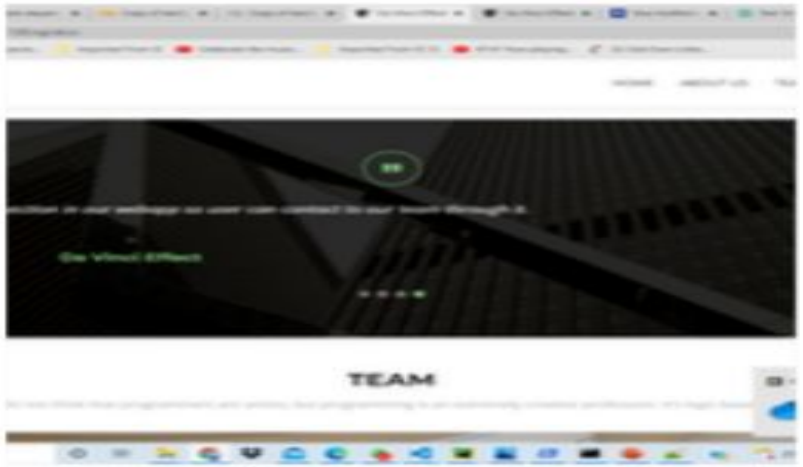
Future implementation:-

1) **We use more categories of image datasets for generating image**
2) **Reducing the generating time within second**
3) **Providing multiple image based on the input text**


ABOUT
TEXT TO IMAGE GENERATION
defghi
nopqr
vwxyz


TEAM


Da Vinci Effect



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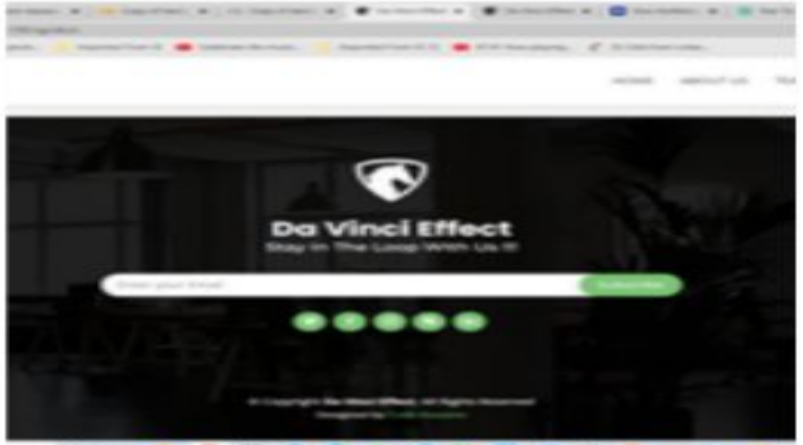
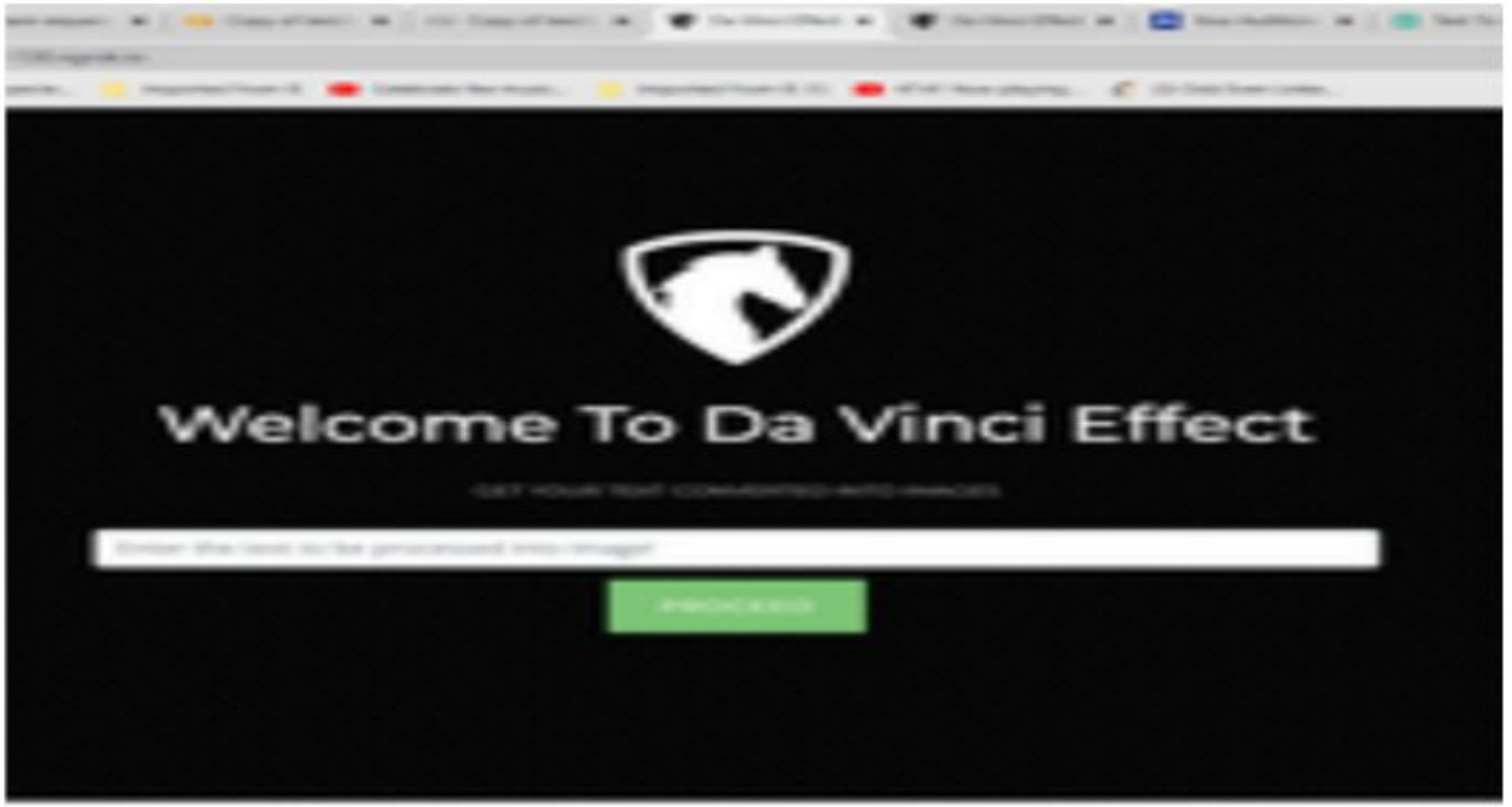

Da Vinci Effect


Welcome To Da Vinci Effect

Copy of tex | Access deni | Share reque | Copy of tex | Copy of tex | Da Vinci Eff | Da Vinci Eff | Your Authtc | Text To Ima | Online Colle

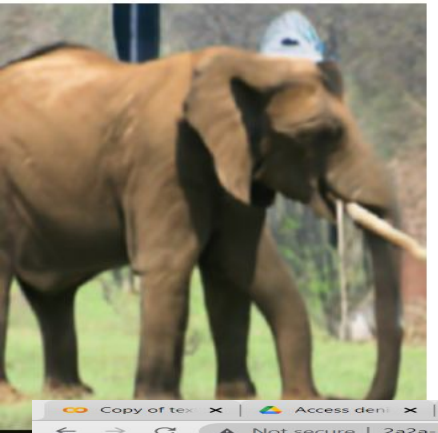
Not secure | 2a2a-35-238-102-130.ngrok.io/result

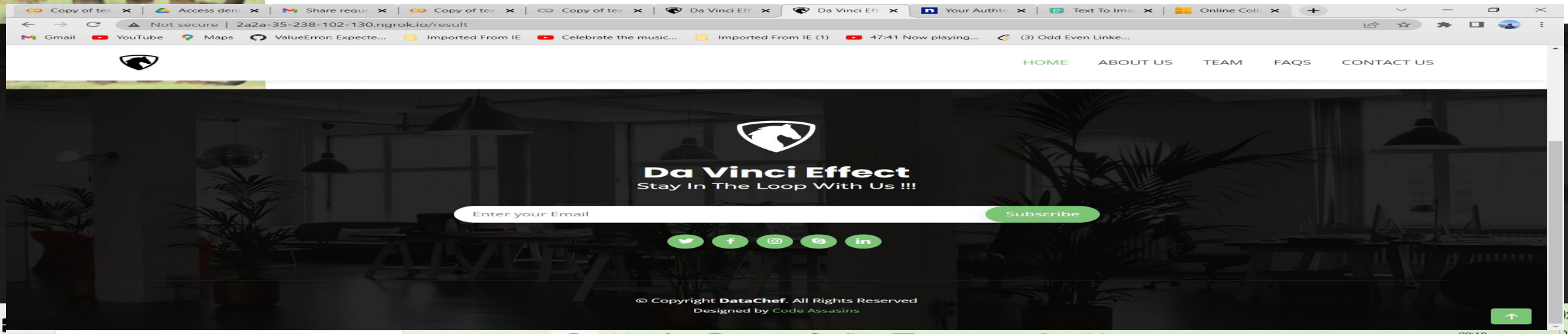
Gmail | YouTube | Maps | ValueError: Expecte... | Imported From IE | Celebrate the music... | Imported From IE (1) | 47:41 Now playing... | (3) Odd Even Linke...

HOME ABOUT US TEAM FAQS CONTACT US

Your image has been generated , Thank You for using Da Vinci Effect!!!

Home / Thanks Page





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28°C ENG 09:18 27-09-2022

REFERENCE

LIVE PROJECT LINK:-https://github.com/devVipin01/text2Image/blob/main/live%20project%20link

DOCKER LINK:-https://hub.docker.com/repository/docker/text2img/text2imge

1) GITHUB LINK :-https://github.com/devVipin01/text2Imag
2) 2) STUDY MATERIAL:-

INEURON WEBSITE

KRISHNAIk

MYSIRJ

Towards data documents