

Hackathon 2

Conditional Generative Modelling

Generative AI Workshop

Problem Statement:

Design a conditional generative model to generate stylised english alphabets (A-Z) where we control which alphabet (eg. R) we want to generate, and style is chosen randomly.

Format of the generative model:

1. Input and Output

- Input: A character (A-Z) and a noise vector. You may use one-hot encoding for the character.
- Output: A 36x36 image rendering the given character in a style controlled by the noise vector.

2. Code

- Use the ipynb file to write your code. You can add as many cells in between.
<https://colab.research.google.com/drive/1amEEzACCG3uqd8tfUaTf4J0UpHs9moM4?usp=sharing>
- Add comments to make your code more readable.

Dataset: (Use this to train your model) [Hackathon_2_Dataset.zip](#)

Assessment metric:

1. Style variability: Different noise vectors should generate different output styles
2. Character consistency: The output image should correspond to the same input character irrespective of the noise vector
3. Style consistency: all characters generated with the same noise vector should have the same style.

This analysis will be done manually by giving different inputs and eye-balling the outputs.

Hint: You may re-use the same model as you built in Hackathon-1.

Submission: [Link](#)

1. Hackathon 2 is to be done in teams of maximum size 2. Although individual participation is allowed, it is highly encouraged to take part in teams for better learning, collaboration, and timely completion of the hackathon.
2. You can take the help of code available online, but the submitted codes should be original. We will check for plagiarism and codes found to be copied from the internet or other teams will not be considered for evaluation.
3. All the submissions should be made using the ipynb notebook provided. You are allowed to use only free resources provided by Google Colab.
4. Provide link to the saved model checkpoints/weights along with helper codes to load the model for inference in the ipynb file.
5. Upload a zip file containing the notebook (.ipynb) and the model checkpoints. The name of the zip file should be TeamName_TeamLeaderRollNo.ipynb. Only the team leader should fill this form.

Deadline: Sunday - 15 October 2023 – 10 PM

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