Programming Competition

Introduction

Sketches have been the oldest mode of human communication which led to the development of symbols and alphabets and eventually formal handwriting. Sketch recognition refers to automated recognition of hand-drawn diagrams using computer programs. The key challenge in computerized recognition of sketches is the unique artistic style of an individual leading to high intra class variations. The competition involves developing a sketch recognition system using any of the deep learning based techniques.

Dataset

To train and evaluate the system, TU-Berlin sketch dataset presented in [1] will be employed. Sample sketches from the database are illustrated in Figure 1.

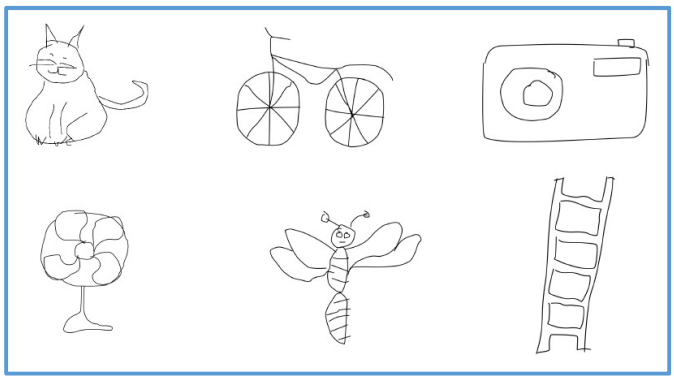

Figure 1 Sample sketches from the database

The database comprises 250 classes of objects and each class has 80 instances. For this particular task, the database is divided into three subsets as follows.

- Training Set: 40 images per class – 40 x250 = 10,000 images
- Validation Set: 20 images per class – 20 x 250 = 5,000 images
- Test Set: 20 images per class – 25 x 250 = 5,000 images

Competition Protocol & Evaluation Metric

The training and validation datasets (with ground truth) will be made available on Day 1 of the competition. The test data will be made available on the final day of competition. Participants are free to use any of the exiting techniques or implementations or come up with their own innovative solutions. It is highly recommended to save the model and weights and not to re-train the model once the test data is provided. Only one system can be submitted by each participant and the systems will be ranked using classification rate as the evaluation metric.

Submission Requirements

Participants need to submit predictions on test data in the form of a CSV file containing query image name and corresponding class labels (similar to ground truth of training and validation datasets). Winner will be announced in the closing session of the school.

References

[1] Eitz, Mathias, James Hays, and Marc Alexa. "How do humans sketch objects?." ACM Trans. Graph. 31.4 (2012): 44-1.

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