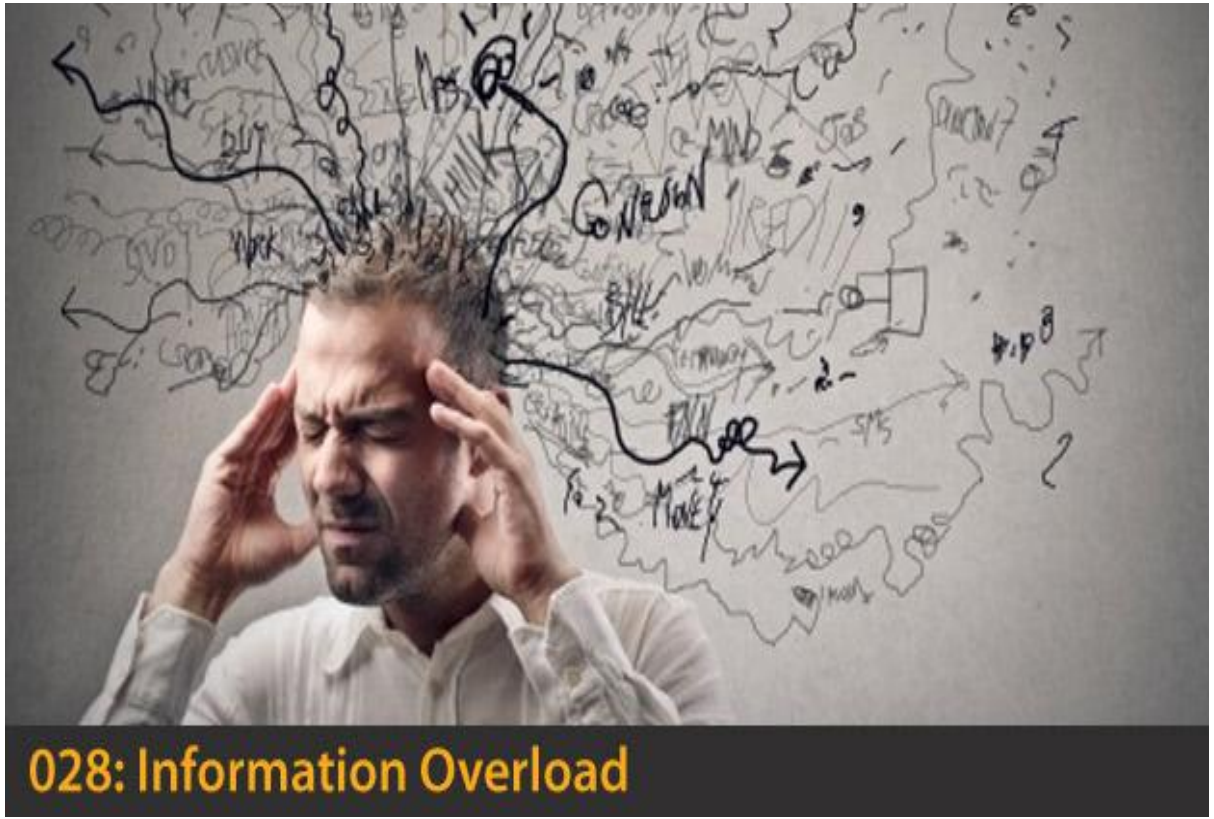
Sketch Based Image Retrieval

Ameya Prabhu, Debayan Das

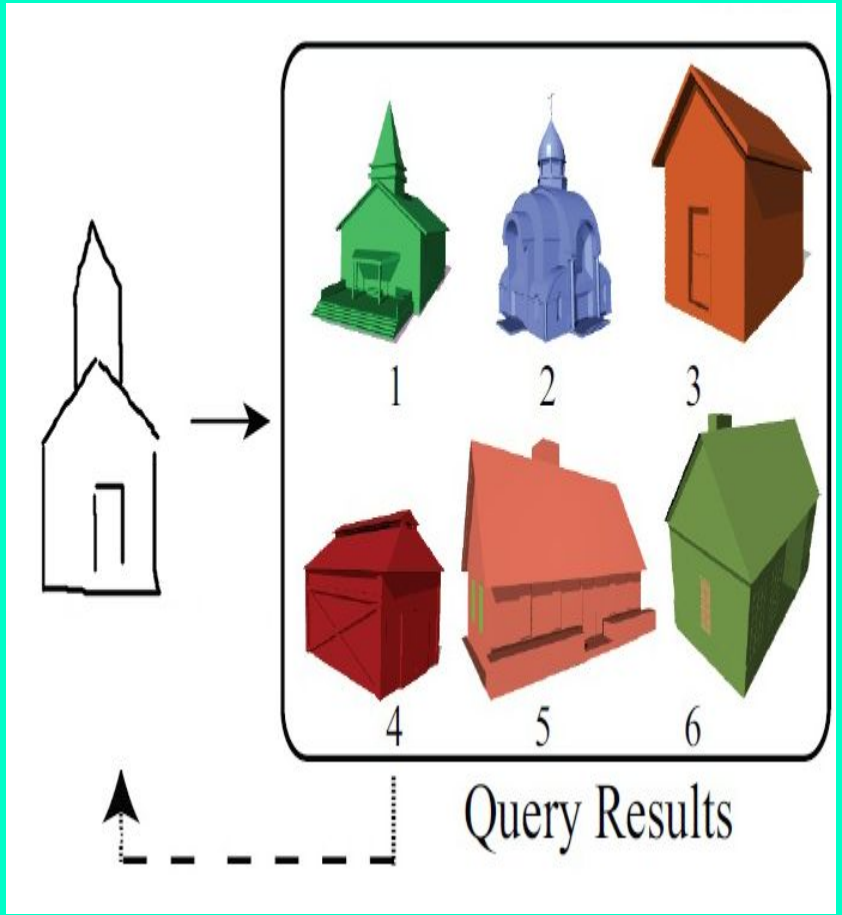
The problem

Traditionally, search has been in terms of textual keywords, but as we know, Each picture is worth a thousand words! And hence, searching using Images has great potential to be used in Content Based Retrieval. But then we rarely have immediate access to the image that we are visualising.



The solution

Everyone is not an artist to generate realistic images, but everyone can make a rough sketch of the object they are thinking of. Hence, given a free-hand sketch of an object/its boundary, we try to search and display images having similar objects. This is academically known as **Sketch Based Image Retrieval (SBIR)**.



How it works

Mode of Input

User draws a Sketch Input.

Image Processing

Apply various Image Processing techniques on the sketch and perform matching with the images stored in the search database.

Matching

We match the sketched input to the contours, find images having similarly shaped objects and rank the outputs.

Milestones

Part 1

Make a database manually of common objects (like house, cat, dog, etc) after applying Countour extraction techniques on images. Perform Matching and compare accuracy with pre-existing solutions.

Part 2

If enough accuracy is obtained, we shall proceed to try our algorithm by annotating sketched objects with text labels and generate search images from the Net using these keywords.