

PROJECT KOJAC PROPOSAL

SHOE RECOMMENDER

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DESCRIPTION

In Project Kojak , I plan to get at least 10,000 images of different categories of shoes using the shopstyle API . There are 10 different categories of shoes that are listed in the website .One of the categories called evening shoes has 1100 images. I plan to use image augmentation methods like blur, rotate to increase the number of training samples for that category .It is a multi class image classification problem to predict the category of the shoe based on the image. I will be using a pretrained VGG16 CNN as my model and just change the last layer to 10 neurons with a softmax activation.I will use OpenCV to transform my images to ensure that all the images have same dimensions as required by the VGG16 input.

I will use AWS to run my model on the p3.x2 machine.I plan to build a flask app to recommend three most similar images to an input image and deploy it using heroku. I will use cosine similarity on the output of the VGG16 to recommend 3 most similar images to a test image .