# Feature extraction pipeline

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## To do

* Make use of classes. A class should run on its own (make use of \_\_main\_\_)
* vidToImage: consider using ffmpeg
* include path information (in, out) and other parameters (e.g. labels) (in form of a class) to pass them between parts of the pipeline
* check and test pipeline with more videos
* scan new image with trained CNN to predict / identify objects in image
* CNN: include transfer learning
* CNN: reduce network architecture and then optimize hyper-parameters: layers, pooling, drop-outs, different activation functions and optimizers
* CNN: include confusion matrix output and consider output of optimizer for different labels
* deploy pipeline on server / cloud / GPU
* test prepImage: consider larger bounding box (BB) (resize by 20 pixels in all directions) and check minimum size of BB
* consider working with grey scale images (1 channel instead of 3 channels)