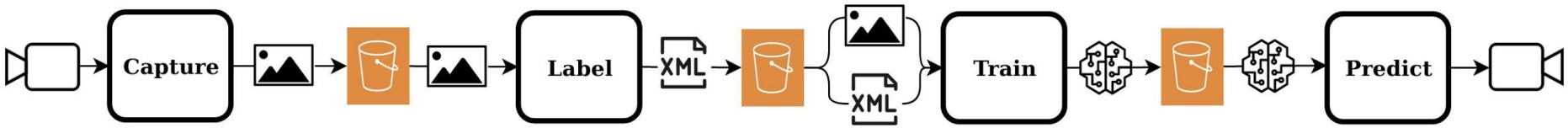
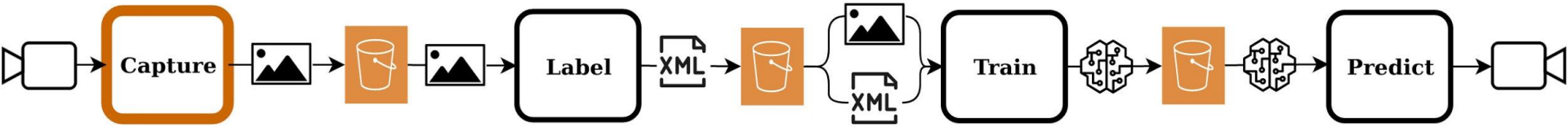
Boja



https://github.com/BrianOfrim/boja

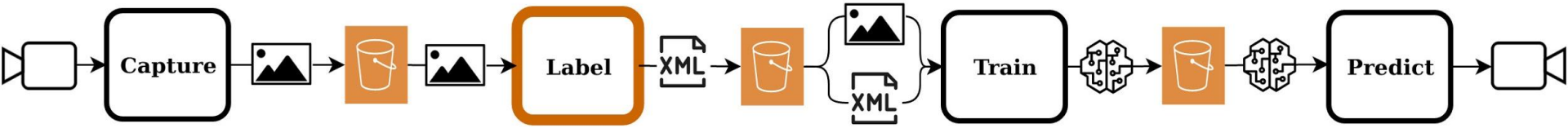
Capture

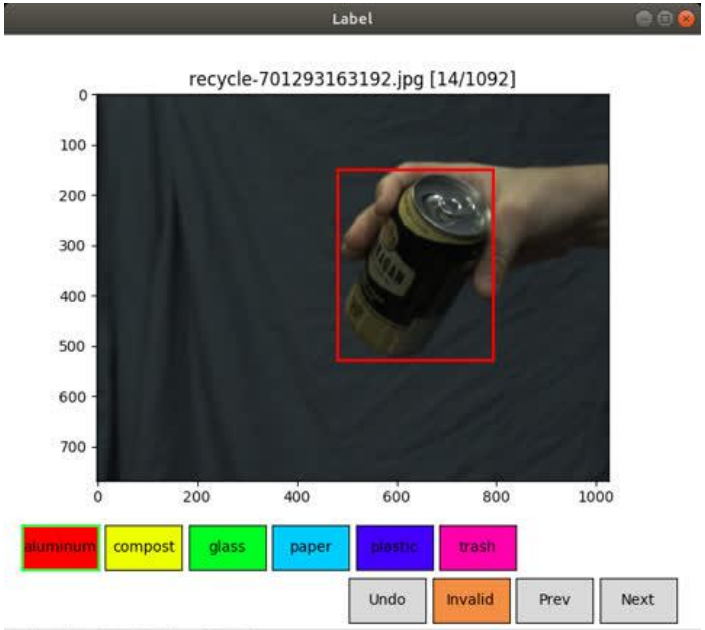


Uses Harvesters Library to capture images from GenICam compliant cameras

User presses “Enter” to save the current image from the live feed and upload it to S3

Label



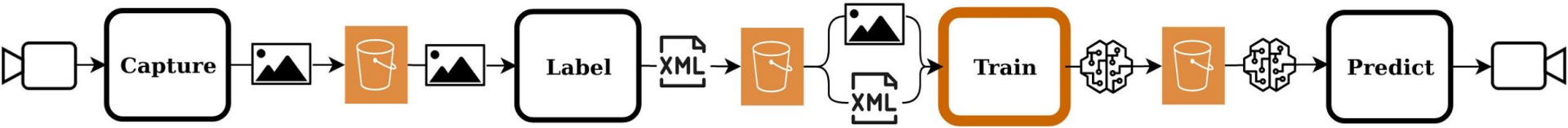


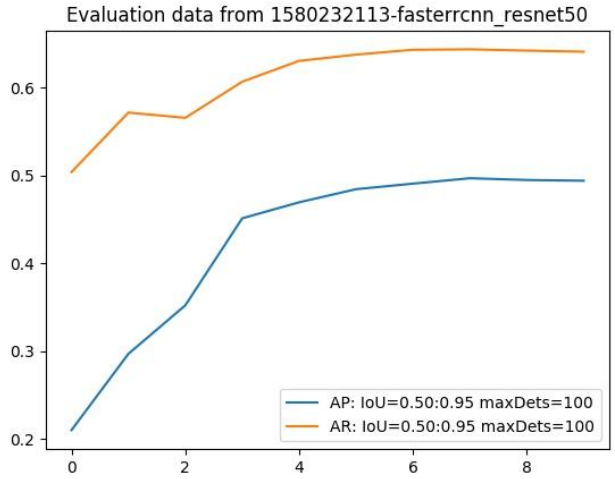
Downloads captured images from s3

Allows the user annotate the images with labeled bounding boxes

Formats the user annotations into Pascal VOC style xml files and uploads to S3

Train



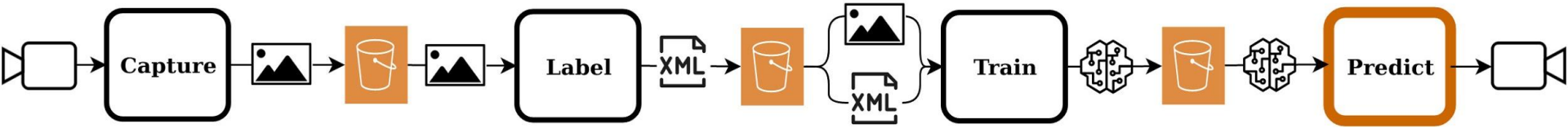


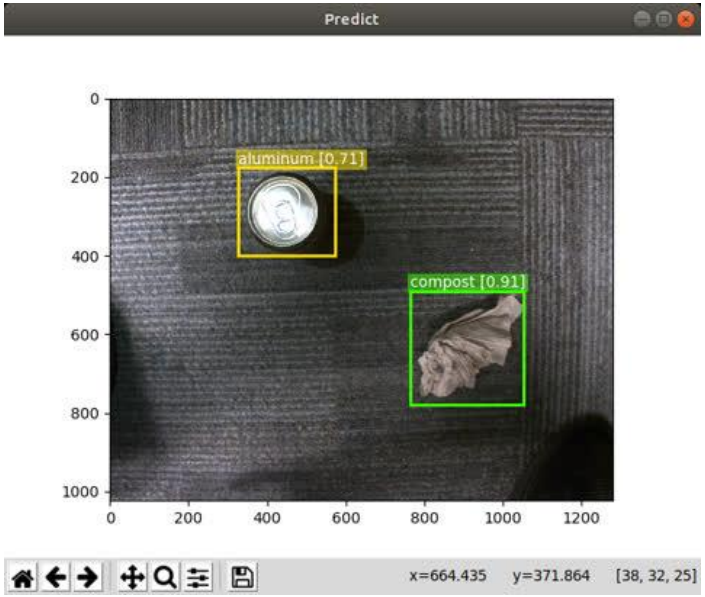
Downloads all images and annotations

Trains a Faster R-CNN object detection model with the user created dataset using PyTorch and torchvision

Uploads the saved model and a plot of key training metrics to s3

Deploy





Downloads the newest saved model and loads the model state

Capture images from a GenICam compliant camera and passes them to the object detection model

Overlays the output bounding boxes, labels and scores on the image