Progress Report

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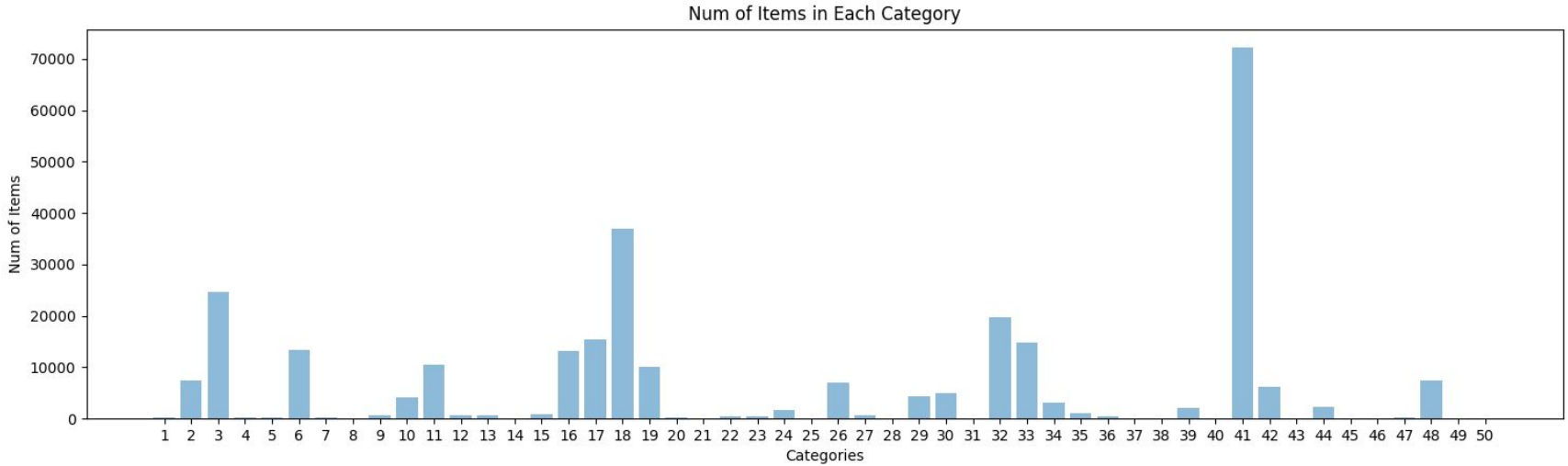
Data Cleaning: Before and After

Original 50 Categories

Anorak	Blazer	Blouse	Bomber	Button-Down	Cardigan	Flannel	Halter	Henley	Hoodie
Jacket	Jersey	Parka	Peacoat	Poncho	Sweater	Tank	Tee	Top	Turtleneck
Capris	Chinos	Culottes	Cutoffs	Gauchos	Jeans	Jeggings	Jodhpurs	Joggers	Leggings
Sarong	Shorts	Skirt	Sweatpants	Sweatshorts	Trunks	Caftan	Cape	Coat	Coverup
Dress	Jumpsuit	Kaftan	Kimono	Nightdress	Onesie	Robe	Romper	Shirtdress	Sundress



Our New 17 Categories

Top	1 Thick Cotton Sweater	2 Thin Cotton Sweater	3 Wool Sweater	4 Short Sleeve Top	5 Sleeveless Top		
Bottom	6 Jeans	7 Trousers	8 Leggings	9 Comfortable Pants	10 Shorts	11 Short Skirt	12 Long Skirt
Full-body	13 Long Full -body Wear	14 Short Full -body Wear					
Outerwear	15 Cardigan	16 Blazer	17 Winter Wear				

Coming Soon !!! [After We Finish Cleaning Our Dataset]
Our goal is to have 5000 images per category

Top: length of sleeves > material

Thick Cotton Sweater

Thin Cotton Sweater

Wool Sweater

Short Sleeve Top

Sleeveless Top

Bottom: length > well-known types

Jeans

Trousers

Leggings

Comfortable Pants

Shorts

Short Skirt

Long Skirt

Full-body: length

Long Full -body Wear

Short Full -body Wear

Outerwear: well-known types

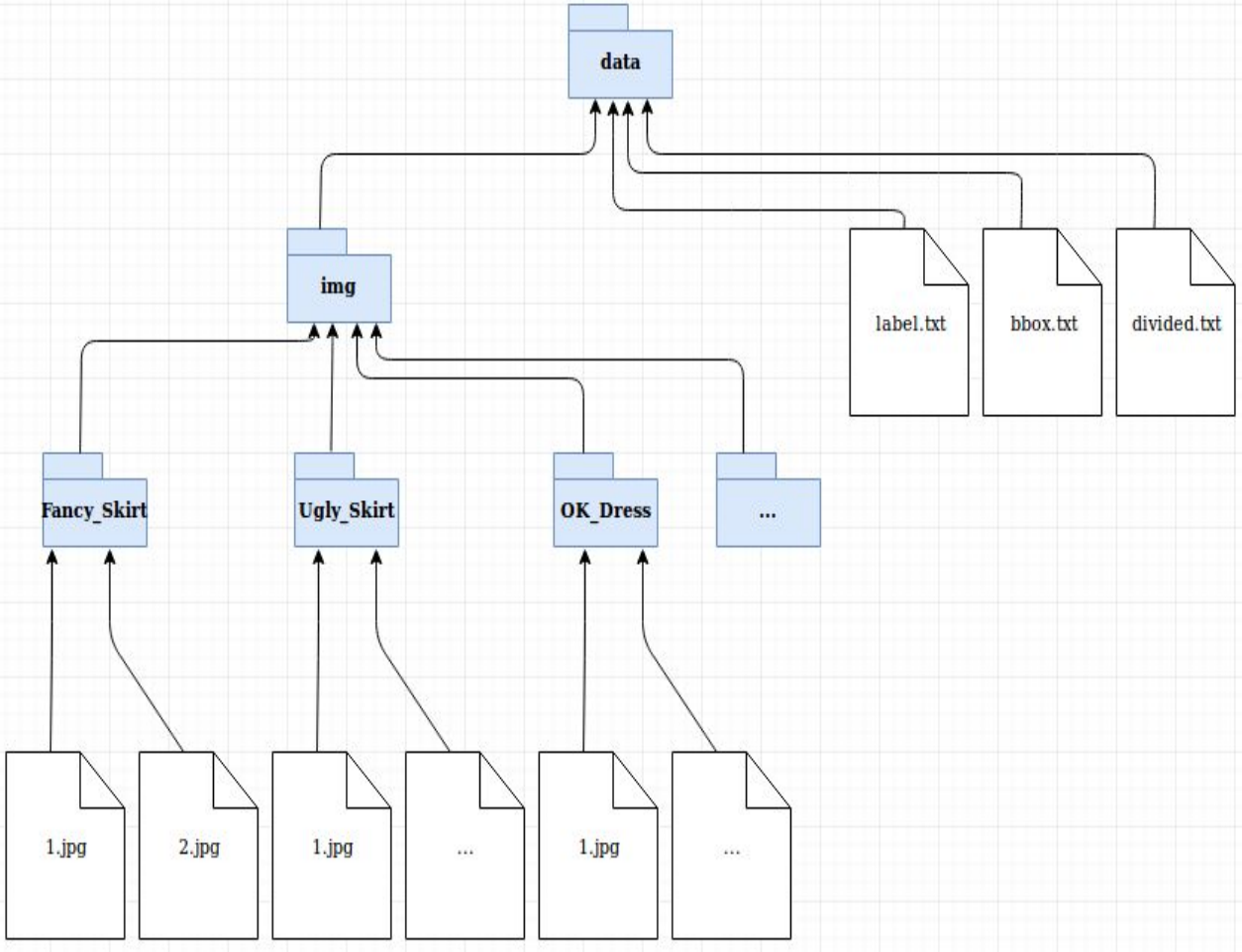
Cardigan

Blazer

Winter Wear

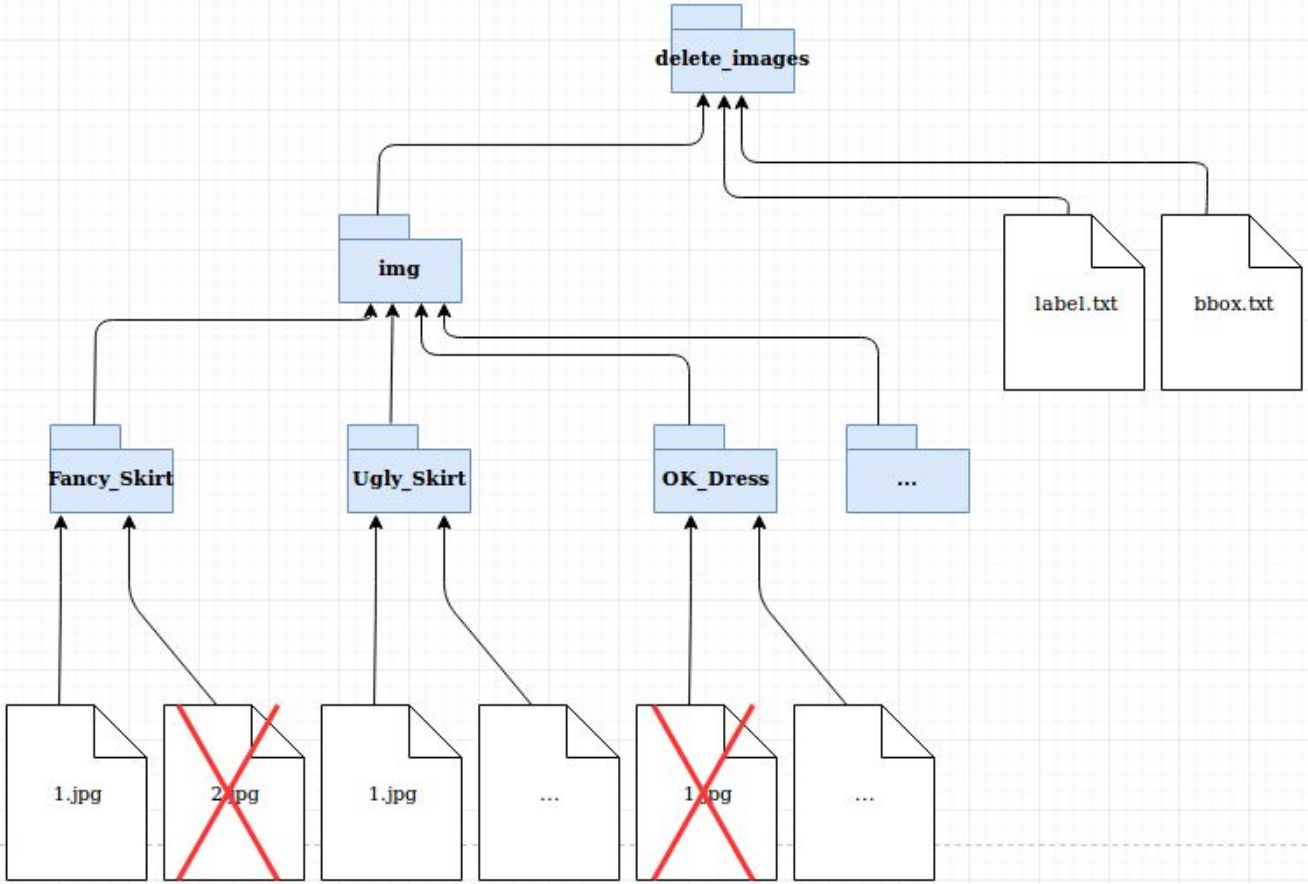
Data Cleaning: The Process

Overall Dataset Structure



- How the deep fashion dataset is organized
- Tried to keep the original structure as much as possible

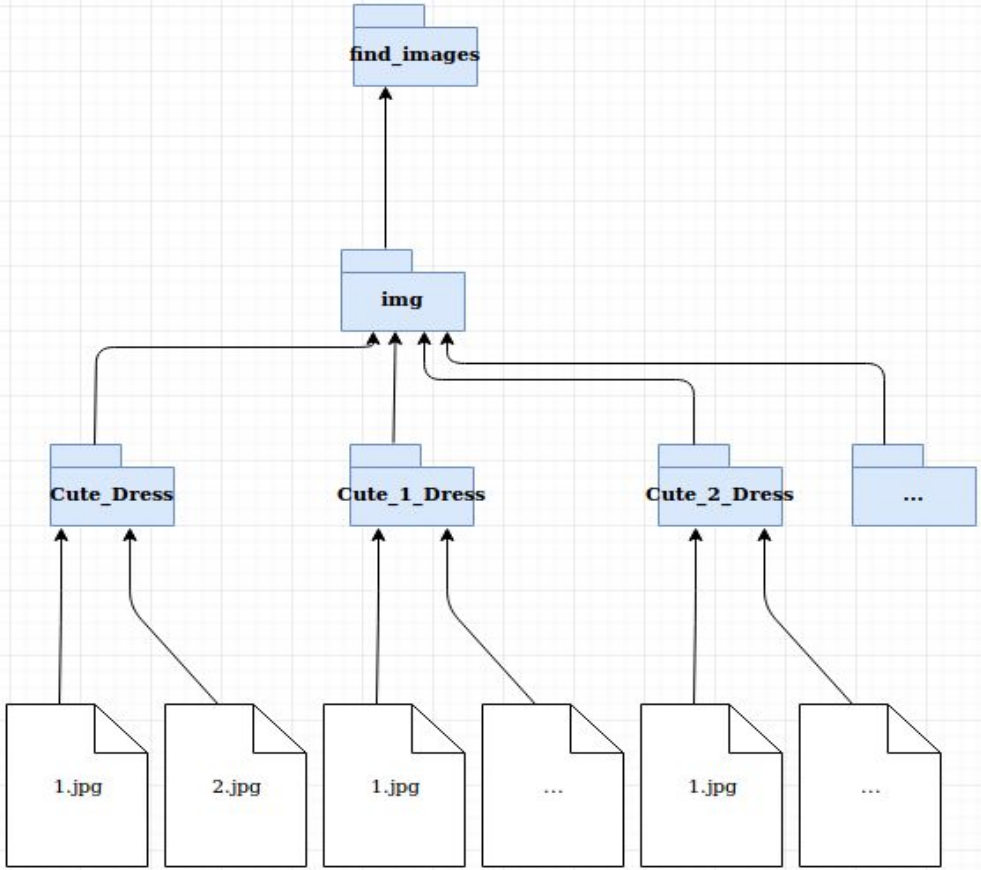
Deleting Bad Images



filter_files.py
path_to_delete_images
label.txt, bbox.txt

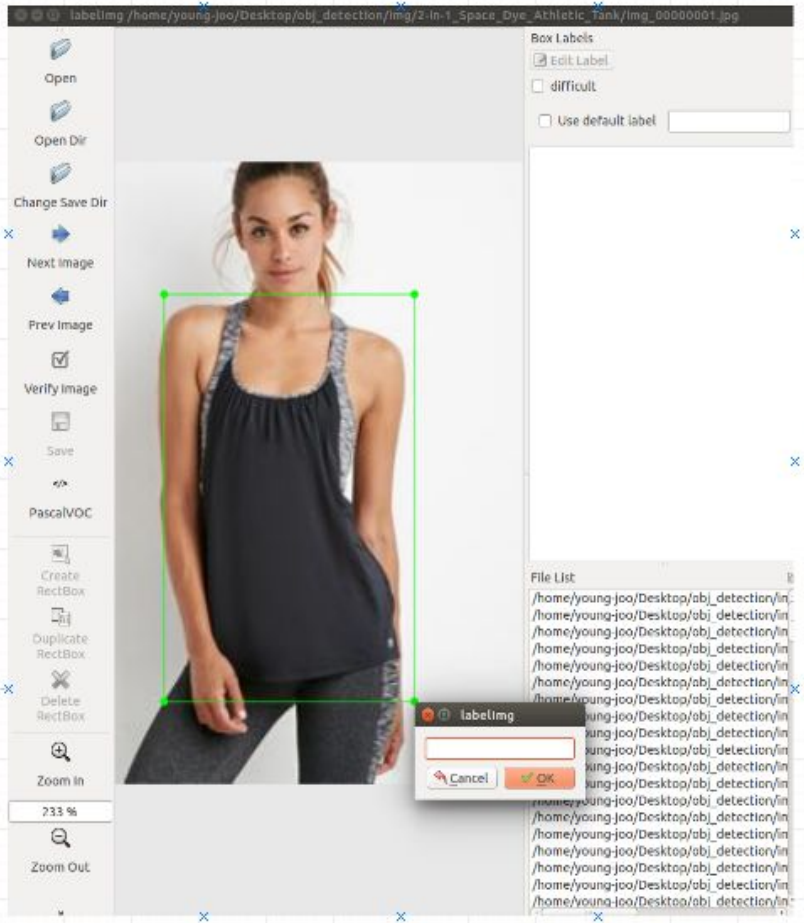
- There were a lot of bad images
- Deleted them and generated new textfiles
- We don't need the divided.txt yet because we need to generate that in the end

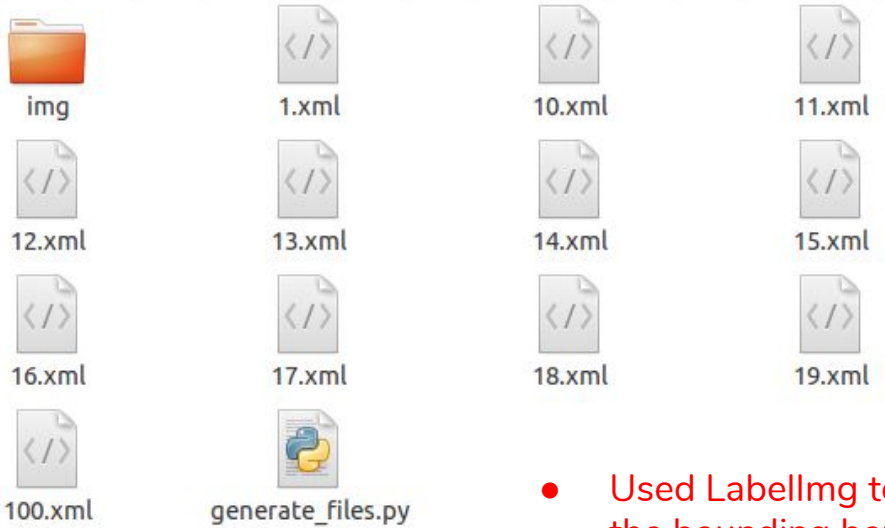
Finding Images Online



generate_files.py
path_to_img
label.txt, bbox.txt

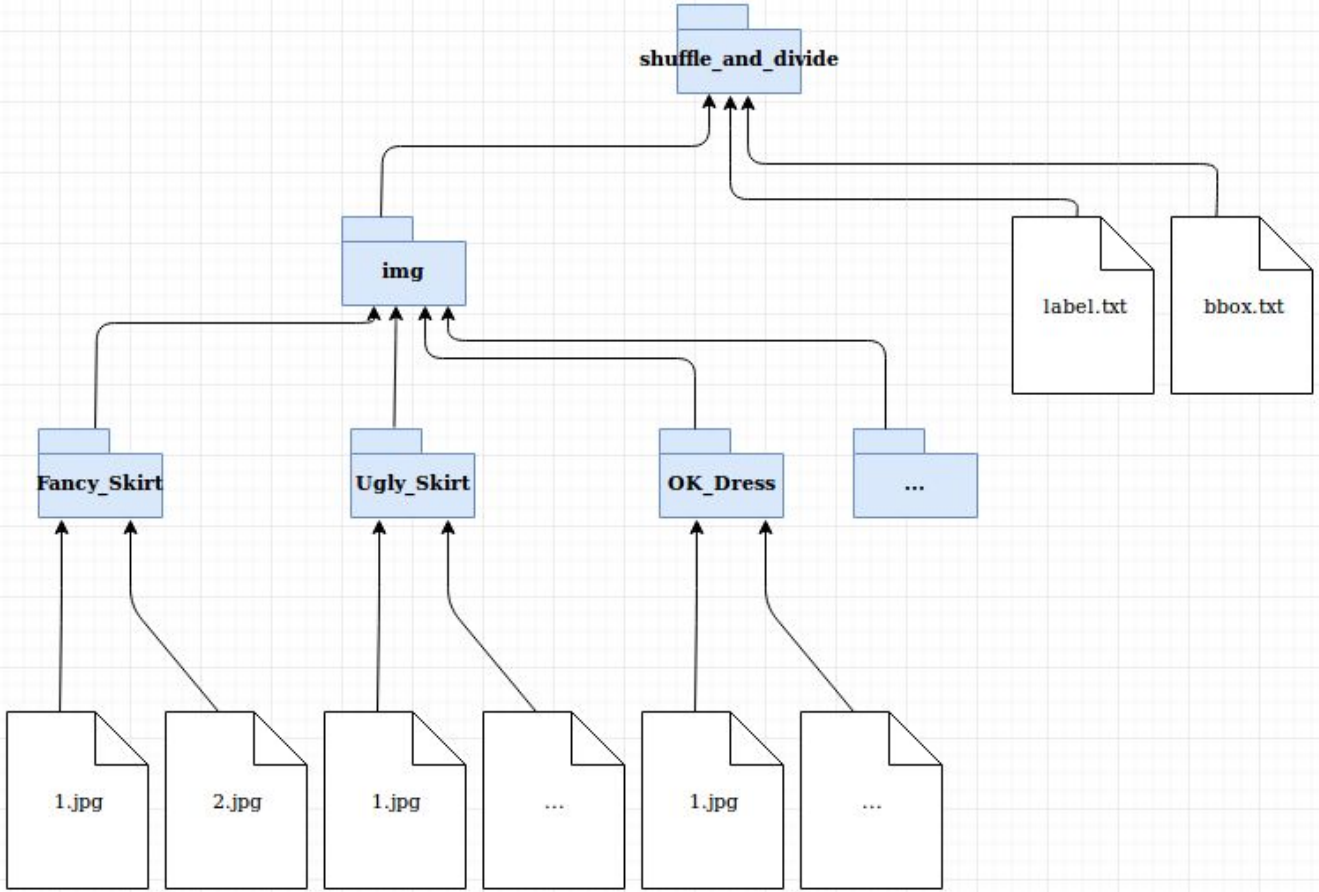
- There weren't enough images for some categories
- Downloaded images from Google
- Tried to organize the downloaded images in the same structure as the original structure
- Needed to generate the two text files from scratch





- Used LabelImg to get the bounding box coordinates
- Parsed xml files to generate the text file containing bounding box coordinates

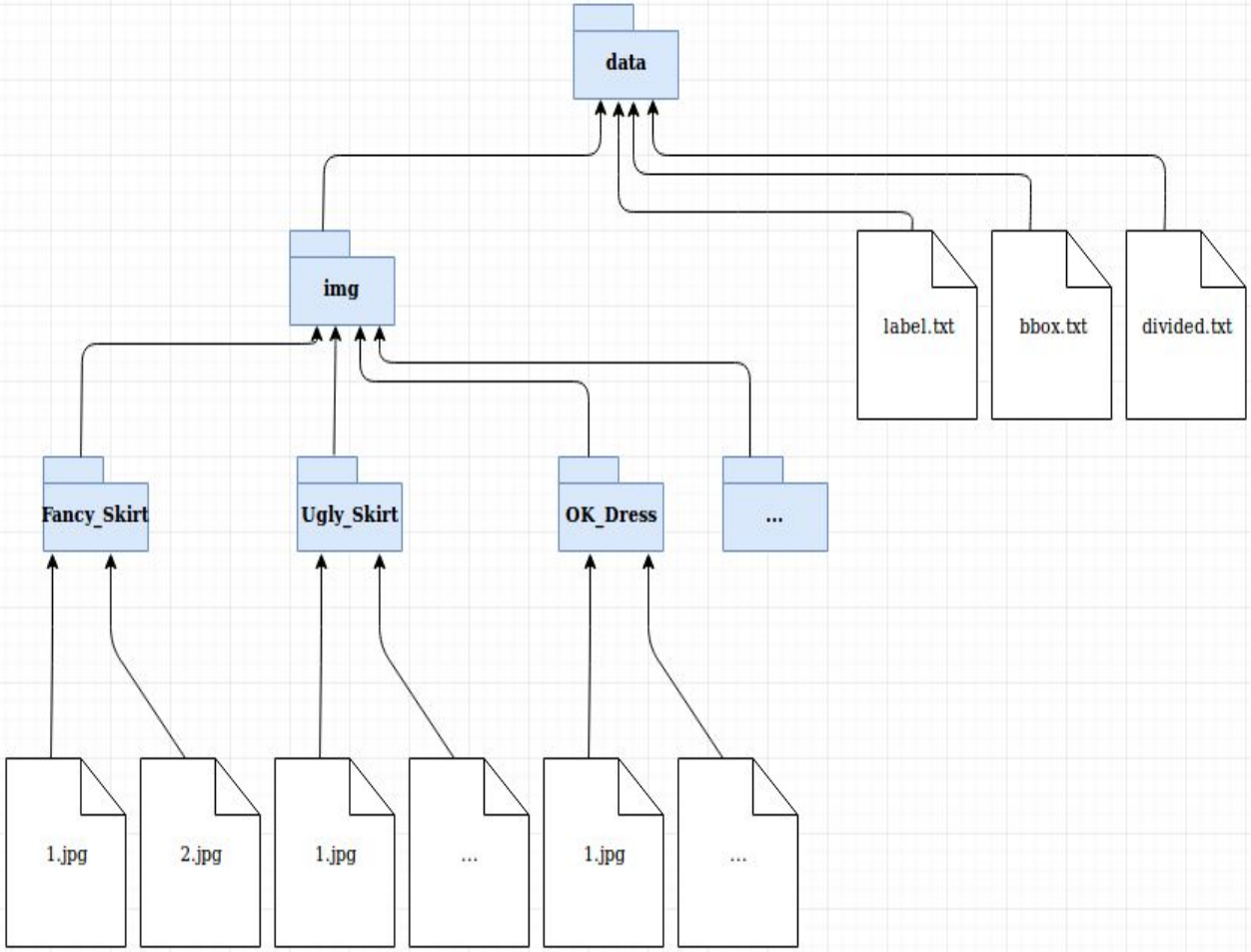
Shuffling and Dividing



shuffle_and_divide.py
path_to_shuffle_and_divide
divided.txt

- Need to finally shuffle so that we can divide our images into those for training and those for testing

Overall Dataset Structure



create_tfrecord.py
path_to_data
testing, training

read_tfrecord.py
testing, training
visualization_of_images

- Our final dataset
- Ready to create tfrecord and start training

Demo

SSD_MobileNet_V2

Speed: 31ms/image → about 30 FPS
Categories:
- short_sleeve_top,
- sleeveless_top,
- wool_sweater,
- winter_wear,
- blazer

Each with 2900 training images

Demo portal

Plans for the Near Future

- Combining our data
- Figuring out how to incorporate heat maps to find ways to improve the performance of our model
  - Alter our dataset accordingly
- If time allows:
  - Deleting images with bad bounding boxes
    - Previously we only deleted images of poor quality
  - Getting more data
  - Trying different object detection models