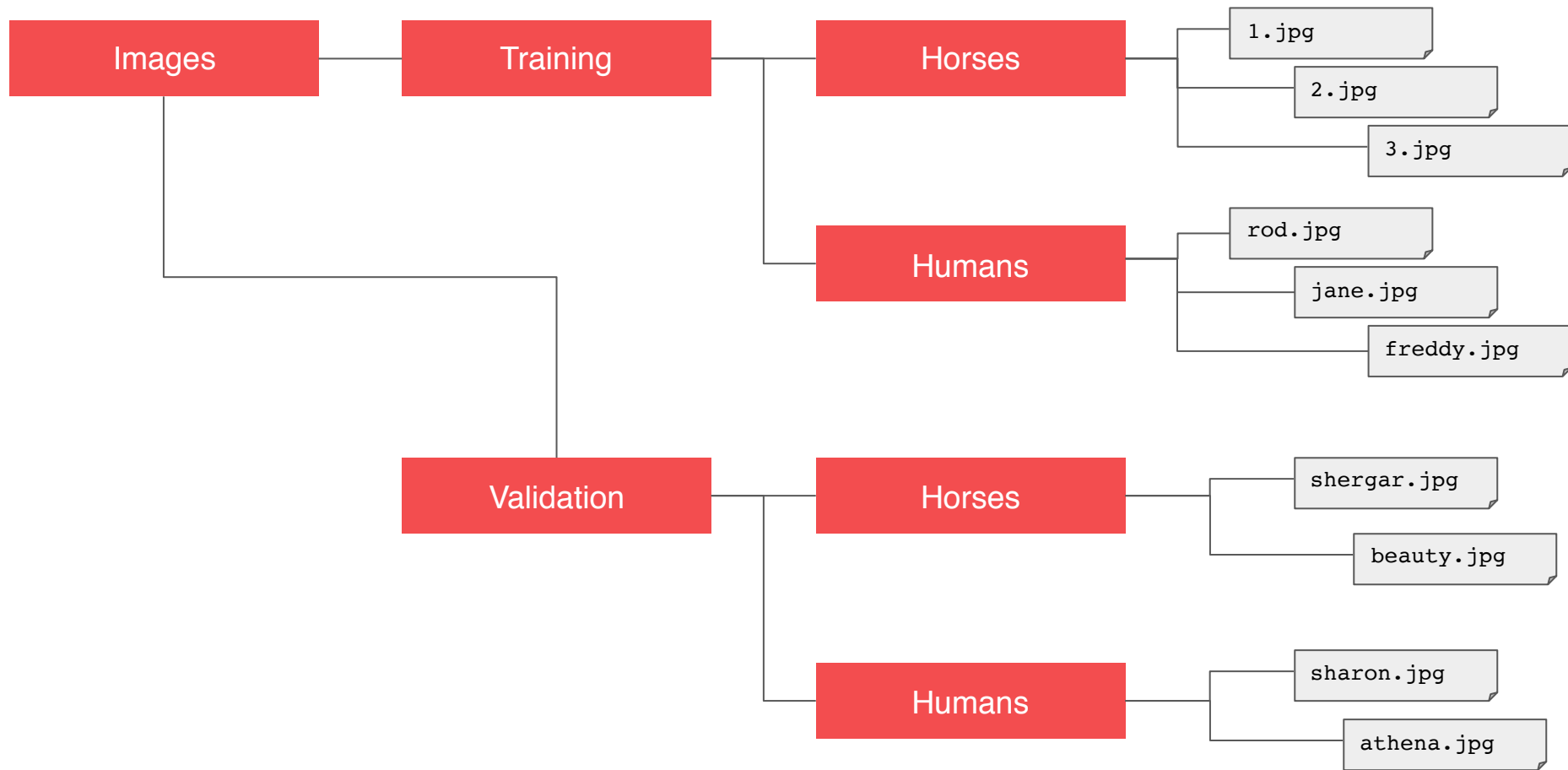


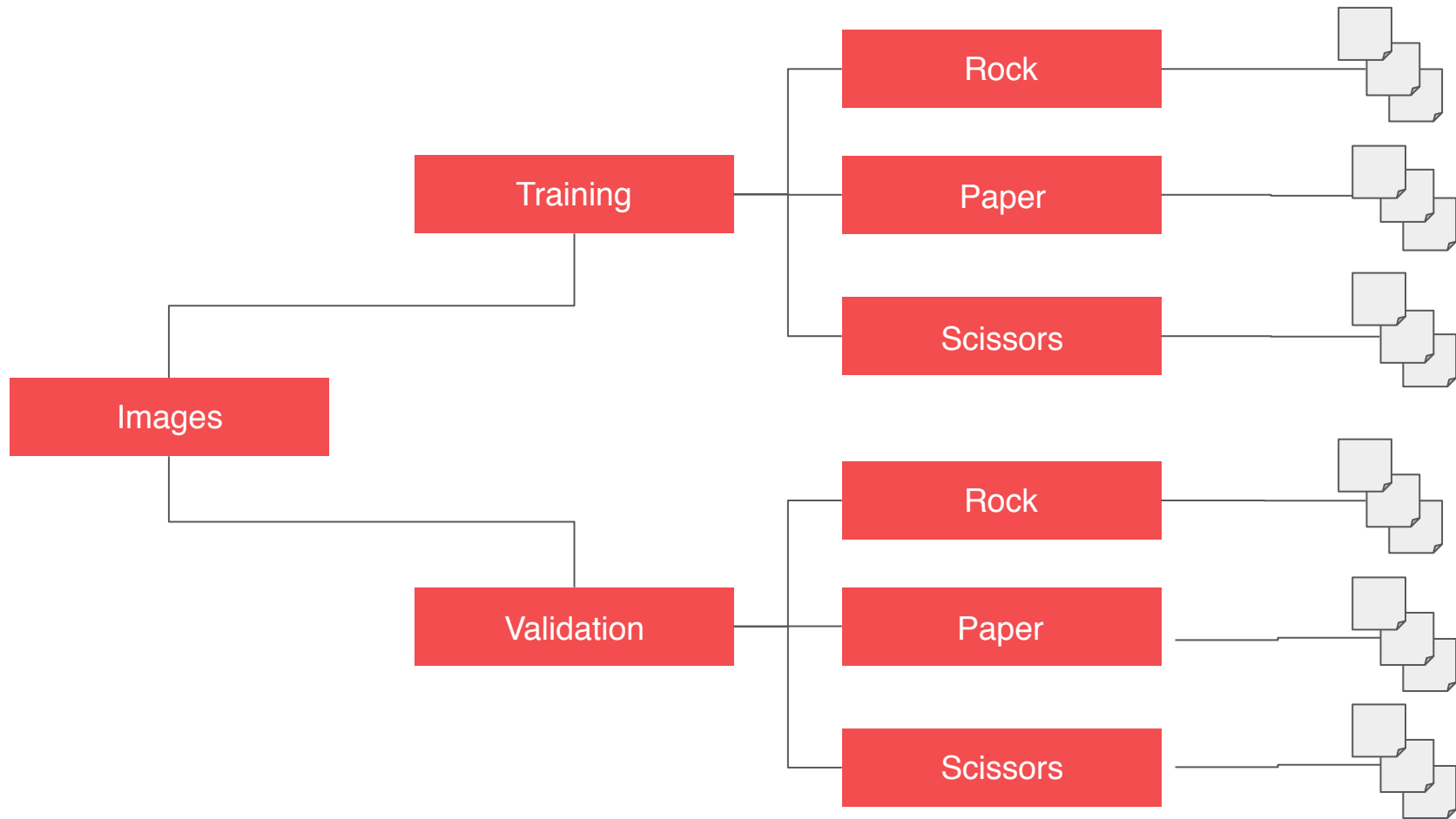
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<http://www.laurencemoroney.com/rock-paper-scissors-dataset/>



Rock Paper Scissors Dataset

Introducing Rock Paper Scissors – A multi class learning dataset

Abstract

Rock Paper Scissors is a dataset containing 2,892 images of diverse hands in Rock/Paper/Scissors poses. It is licensed [CC By 2.0](#) and available for all purposes, but it's intent is primarily for learning and research.

Overview

Rock Paper Scissors contains images from a variety of different hands, from different races, ages and genders, posed into Rock / Paper or Scissors and labelled as such. You can download the [training set here](#), and the [test set here](#). These images have all been generated using CGI techniques as an experiment in determining if a CGI-based dataset can be

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TensorFlow 
@TensorFlow

In the third episode of the Intro to Google Colaboratory series, [@lmoroney](#) covers how to quickly build a neural network for basic Breast Cancer classification.

Watch this [#CodingTensorFlow](#) → bit.ly/2SPD4XC

P.S. Don't forget to add your homework below!



```
train_datagen = ImageDataGenerator(rescale=1./255)
```

```
train_generator = train_datagen.flow_from_directory(  
    train_dir,  
    target_size=(300, 300),  
    batch_size=128,  
    class_mode='binary')
```

```
train_datagen = ImageDataGenerator(rescale=1./255)
```

```
train_generator = train_datagen.flow_from_directory(  
    train_dir,  
    target_size=(300, 300),  
    batch_size=128,  
    class_mode='categorical')
```

```
model = tf.keras.models.Sequential([
    tf.keras.layers.Conv2D(16, (3,3), activation='relu',
                           input_shape=(300, 300, 3)),
    tf.keras.layers.MaxPooling2D(2, 2),
    tf.keras.layers.Conv2D(32, (3,3), activation='relu'),
    tf.keras.layers.MaxPooling2D(2,2),
    tf.keras.layers.Conv2D(64, (3,3), activation='relu'),
    tf.keras.layers.MaxPooling2D(2,2),
    tf.keras.layers.Flatten(),
    tf.keras.layers.Dense(512, activation='relu'),
    tf.keras.layers.Dense(1, activation='sigmoid')
])
```



```
model = tf.keras.models.Sequential([
    tf.keras.layers.Conv2D(16, (3,3), activation='relu',
                           input_shape=(300, 300, 3)),
    tf.keras.layers.MaxPooling2D(2, 2),
    tf.keras.layers.Conv2D(32, (3,3), activation='relu'),
    tf.keras.layers.MaxPooling2D(2,2),
    tf.keras.layers.Conv2D(64, (3,3), activation='relu'),
    tf.keras.layers.MaxPooling2D(2,2),
    tf.keras.layers.Flatten(),
    tf.keras.layers.Dense(512, activation='relu'),
    tf.keras.layers.Dense(3, activation='softmax')
])
```



Rock: 0.001

Paper:
0.647

Scissors:
0.352

```
from tensorflow.keras.optimizers import RMSprop
```

```
model.compile(loss='binary_crossentropy',  
              optimizer=RMSprop(lr=0.001),  
              metrics=['acc'])
```

```
from tensorflow.keras.optimizers import RMSprop
```

```
model.compile(loss='categorical_crossentropy',  
              optimizer=RMSprop(lr=0.001),  
              metrics=['acc'])
```

