**Abstract:**

Age Detection is an automated age detection algorithm which detects age in this context child, young, middle\_age or old. This takes image as an input and gives an image as an output with a rectangle around the face in the image (face detection) along with a label describing the age category the person belongs to.

**Dataset:** Dataset is taken from kaagle

**Model used:** HOG model is used to detect the age of a person

**Layers in model:**

layers {

name: "conv1"

type: CONVOLUTION

bottom: "data"

top: "conv1"

convolution\_param {

num\_output: 96

kernel\_size: 7

stride: 4

}

}

layers {

name: "relu1"

type: RELU

bottom: "conv1"

top: "conv1"

}

layers {

name: "pool1"

type: POOLING

bottom: "conv1"

top: "pool1"

pooling\_param {

pool: MAX

kernel\_size: 3

stride: 2

}

}

layers {

name: "norm1"

type: LRN

bottom: "pool1"

top: "norm1"

lrn\_param {

local\_size: 5

alpha: 0.0001

beta: 0.75

}

}

layers {

name: "conv2"

type: CONVOLUTION

bottom: "norm1"

top: "conv2"

convolution\_param {

num\_output: 256

pad: 2

kernel\_size: 5

}

}

layers {

name: "relu2"

type: RELU

bottom: "conv2"

top: "conv2"

}

layers {

name: "pool2"

type: POOLING

bottom: "conv2"

top: "pool2"

pooling\_param {

pool: MAX

kernel\_size: 3

stride: 2

}

}

layers {

name: "norm2"

type: LRN

bottom: "pool2"

top: "norm2"

lrn\_param {

local\_size: 5

alpha: 0.0001

beta: 0.75

}

}

layers {

name: "conv3"

type: CONVOLUTION

bottom: "norm2"

top: "conv3"

convolution\_param {

num\_output: 384

pad: 1

kernel\_size: 3

}

}

layers{

name: "relu3"

type: RELU

bottom: "conv3"

top: "conv3"

}

layers {

name: "pool5"

type: POOLING

bottom: "conv3"

top: "pool5"

pooling\_param {

pool: MAX

kernel\_size: 3

stride: 2

}

}

layers {

name: "fc6"

type: INNER\_PRODUCT

bottom: "pool5"

top: "fc6"

inner\_product\_param {

num\_output: 512

}

}

layers {

name: "relu6"

type: RELU

bottom: "fc6"

top: "fc6"

}

layers {

name: "drop6"

type: DROPOUT

bottom: "fc6"

top: "fc6"

dropout\_param {

dropout\_ratio: 0.5

}

}

layers {

name: "fc7"

type: INNER\_PRODUCT

bottom: "fc6"

top: "fc7"

inner\_product\_param {

num\_output: 512

}

}

layers {

name: "relu7"

type: RELU

bottom: "fc7"

top: "fc7"

}

layers {

name: "drop7"

type: DROPOUT

bottom: "fc7"

top: "fc7"

dropout\_param {

dropout\_ratio: 0.5

}

}

layers {

name: "fc8"

type: INNER\_PRODUCT

bottom: "fc7"

top: "fc8"

inner\_product\_param {

num\_output: 8

}

}

layers {

name: "prob"

type: SOFTMAX

bottom: "fc8"

top: "prob"

}

**Snap Shot:**



