

425 assignment #2
leticia nakajima (23720155)

answer to questions 5 & 6:

5. The threshold that achieves equal error rate for me is .56.

6. The recall rate of this program for each image is...

judybats: 4/5

sports: 0/1

students: 23/27

tree: 0/0

fans: 0/3

family: 2/3

This program has a very low recall rate on some images because it's not resistant to certain conditions such as lighting and rotation.

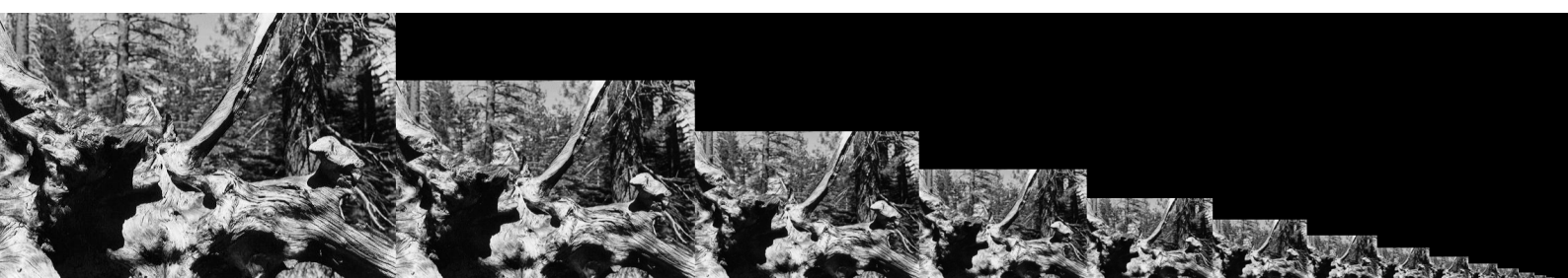
-scripts:

output of `print(MakePyramid("sports",1))`

```
a2 — -bash — 80x24
Last login: Fri Feb  8 09:33:16 on ttys000
[Leticias-MacBook-Pro:~ leticianakajima$ cd /Users/leticianakajima/PycharmProject]
s/a2
[Leticias-MacBook-Pro:a2 leticianakajima$ python a2.py]
[<PIL.JpegImagePlugin.JpegImageFile image mode=L size=365x450 at 0x105498860>, <
PIL.Image.Image image mode=L size=273x337 at 0x103D9AA20>, <PIL.Image.Image image
mode=L size=204x252 at 0x103D9AA58>, <PIL.Image.Image image mode=L size=153x18
9 at 0x106CEBC50>, <PIL.Image.Image image mode=L size=114x141 at 0x106CF69B0>, <
PIL.Image.Image image mode=L size=85x105 at 0x106CF6C88>, <PIL.Image.Image image
mode=L size=63x78 at 0x106CF6CC0>, <PIL.Image.Image image mode=L size=47x58 at
0x106CF6CF8>, <PIL.Image.Image image mode=L size=35x43 at 0x106CF6D30>, <PIL.Ima
ge.Image image mode=L size=26x32 at 0x106CF6D68>, <PIL.Image.Image image mode=L
size=19x24 at 0x106CF6DA0>, <PIL.Image.Image image mode=L size=14x18 at 0x106CF6
DD8>, <PIL.Image.Image image mode=L size=10x13 at 0x106CF6E10>, <PIL.Image.Image
image mode=L size=7x9 at 0x106CF6E48>, <PIL.Image.Image image mode=L size=5x6 a
t 0x106CF6E80>, <PIL.Image.Image image mode=L size=3x4 at 0x106CF6EB8>, <PIL.Ima
ge.Image image mode=L size=2x3 at 0x106CF6EF0>, <PIL.Image.Image image mode=L si
ze=1x2 at 0x106CF6F28>]
Leticias-MacBook-Pro:a2 leticianakajima$
```

-specified image:

output of `ShowPyramid(MakePyramid("tree", 1))`



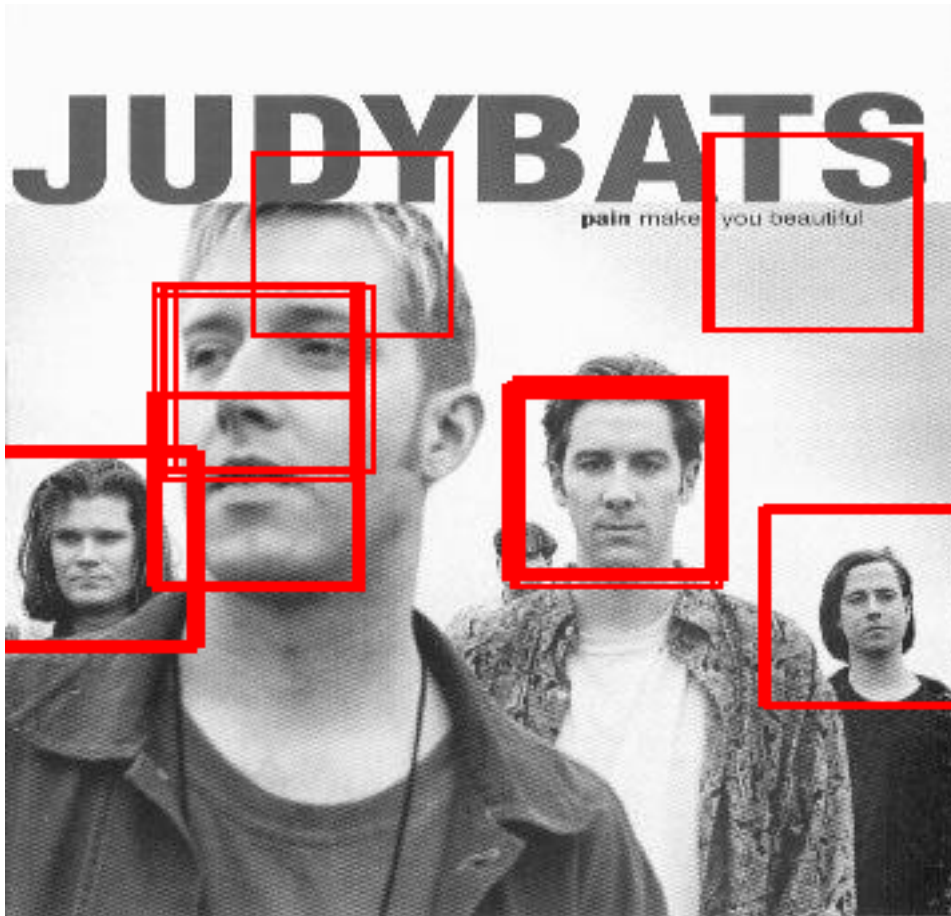
-final selection of threshold: 0.56

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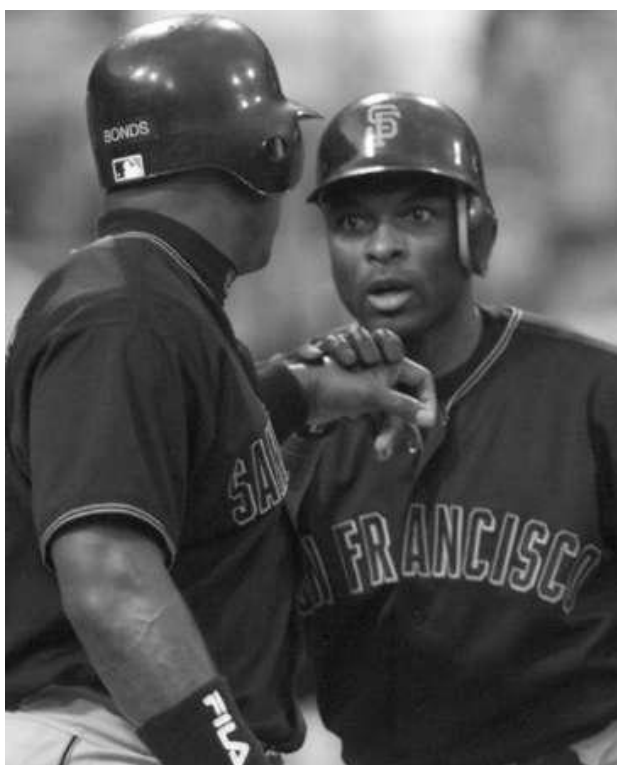
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-face recognition for all 6 images:

judybats: FindTemplate(MakePyramid("judybats",1), "template", .56)

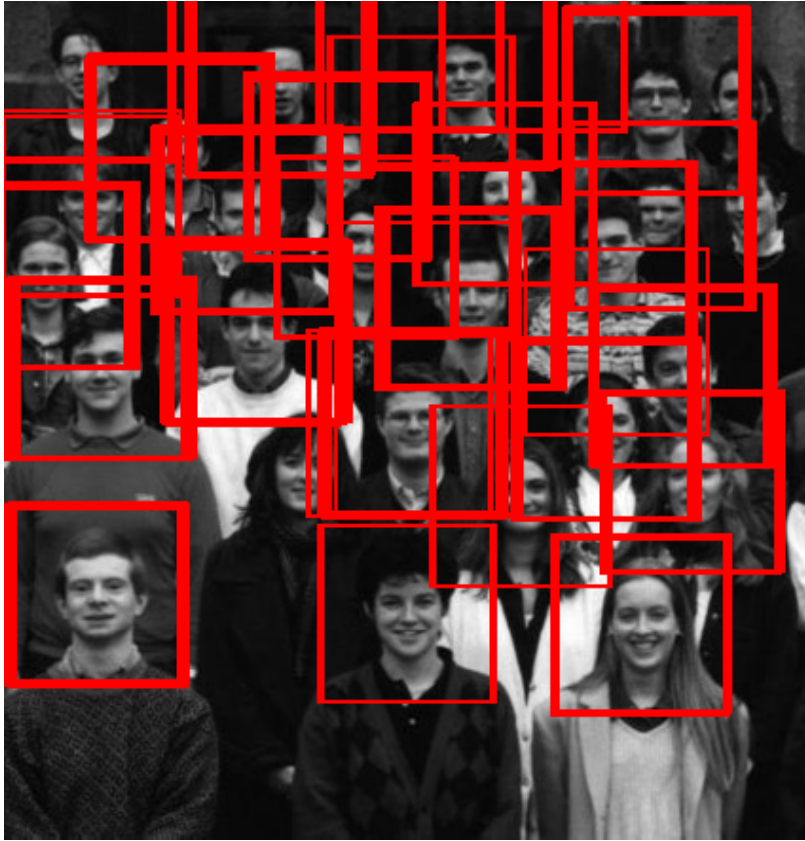


sports: FindTemplate(MakePyramid("sports",1), "template", .56)

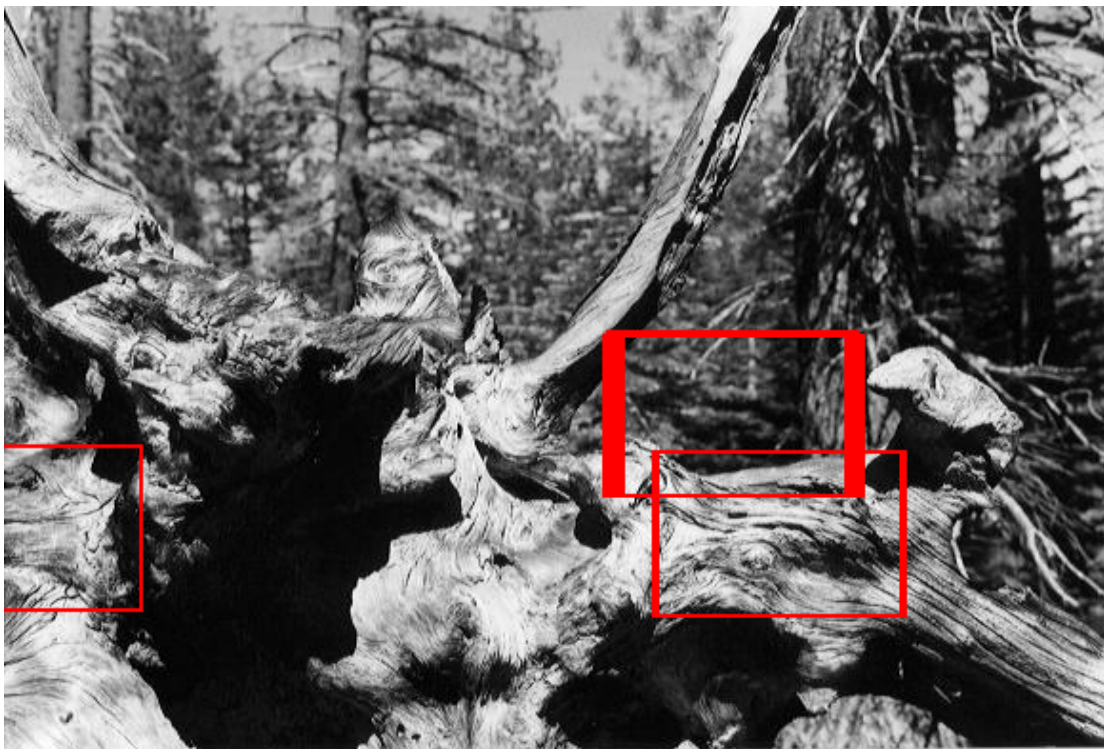


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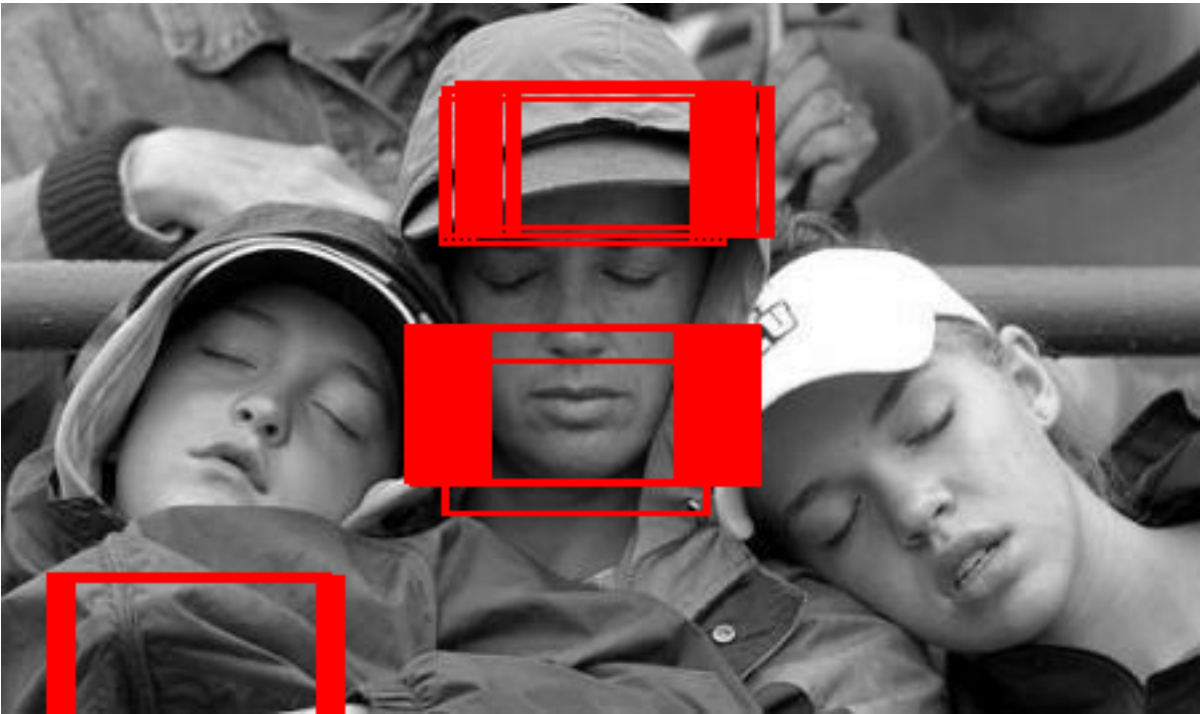
students: FindTemplate(MakePyramid("students",1), "template", .56)



tree: FindTemplate(MakePyramid("tree",1), "template", .56)



fans: FindTemplate(MakePyramid("fans",1), "template", .56)



family: FindTemplate(MakePyramid("family",1), "template", .56)

