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LAMPIRAN**LAMPIRAN**

Lampiran 1 *Dataset*



Akademi Keperawatan Batari
Toja Watampone9.jpg



AMIKOM8.jpg



Institut Pertanian Bogor4.jpg



Akademi Keperawatan Batari
Toja Watampone8.jpg



AMIKOM7.jpg



Institut Pertanian Bogor3.jpg



Akademi Keperawatan Batari
Toja Watampone7.jpg



AMIKOM6.jpg



Institut Pertanian Bogor2.jpg



Akademi Keperawatan Batari
Toja Watampone6.jpg



MIKOM5.jpg



Institut Pertanian Bogor1.jpg



Akademi Keperawatan Batari
Toja Watamone4.jpg



AMIKOM3.jpg



Institut Pertanian Bogor.jpg



STIA Puangrimaggalatung
Bone6.jpg



STIE AMKOP Makassar8.jpg



STIE Yayasan Pendidikan Ujung
Pandang9.jpg



Puangmaggalatung
Bone5.jpg



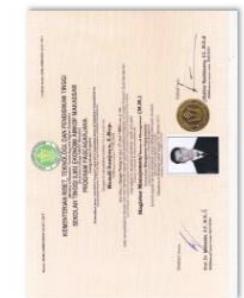
STIE AMKOP Makassar7.jpg



STIE Yayasan Pendidikan Ujung
Pandang6.jpg



IA Puangrimaggalatung
Bone3.jpg



STIE AMKOP Makassar5.jpg



STIE Yayasan Pendidikan Ujung
Pandang5.jpg



Puangrimaggalatung
Bone2.jpg



STIE AMKOP Makassar4.jpg



STIE Yayasan Pendidikan Ujung
Pandang4.jpg



IA Puangrimaggalatung
Bone1.jpg



TIE AMKOP Makassar3.jpg



TIE Yayasan Pendidikan Ujung
Pandang 1.jpg



STIESIA Surabaya9.jpg



STIESIA9.jpg



Universitas Indonesia9.jpg



STIESIA Surabaya8.jpg



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STIESIA Surabaya2.jpg



STIESIA7.jpg



Universitas Indonesia5.jpg



STIESIA Surabaya1.jpg



STIESIA6.jpg



Universitas Indonesia4.jpg



STIESIA Surabaya.jpg



STIESIA5.jpg



Universitas Indonesia3.jpg



Universitas Klabat9.jpg



Universitas Mercu Buana9.jpg



Universitas Muhammadiyah
Makassar9.jpg



Universitas Klabat8.jpg



Universitas Mercu Buana8.jpg



Universitas Muhammadiyah
Makassar6.jpg



Universitas Klabat7.jpg



Universitas Mercu Buana7.jpg



Universitas Muhammadiyah
Makassar5.jpg



Universitas Klabat6.jpg



Universitas Mercu Buana6.jpg



Universitas Muhammadiyah
Makassar2.jpg



Universitas Klabat5.jpg



Universitas Mercu Buana5.jpg



Universitas Muhammadiyah
Makassar1.jpg



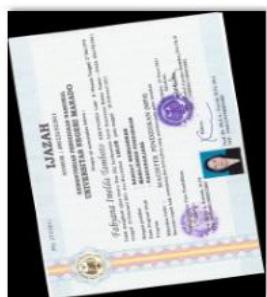
Universitas Negeri Manado6.jpg



Universitas Tadulako6.jpg



Universitas Teknologi
Surabaya9.jpg



Universitas Negeri Manado5.jpg



Universitas Tadulako5.jpg



Universitas Teknologi
Surabaya8.jpg



Universitas Negeri Manado3.jpg



Universitas Tadulako4.jpg



Universitas Teknologi
Surabaya7.jpg



Universitas Negeri Manado2.jpg



Universitas Tadulako3.jpg



Universitas Teknologi
Surabaya6.jpg



Universitas Negeri Manado1.jpg



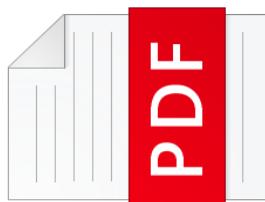
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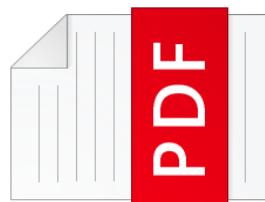
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Surabaya5.jpg

Lampiran 2 Koleksi gambar ijazah dari website forlap.ristekdikti.go.id, dalam bentuk file *.jfif dan *.pdf

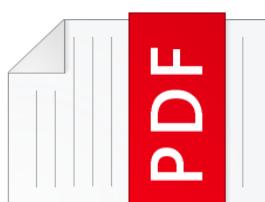




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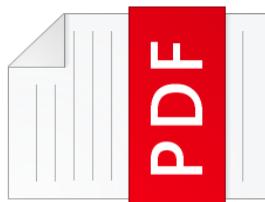
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pdf



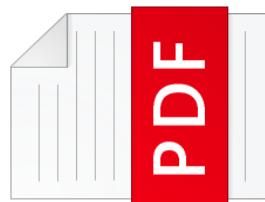
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df



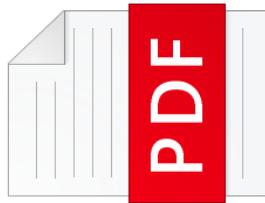
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pdf



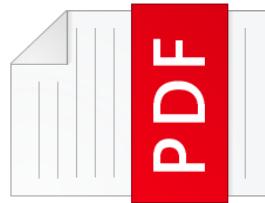
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Ltk3MztQzBNkM2NjyMTM3.
pdf



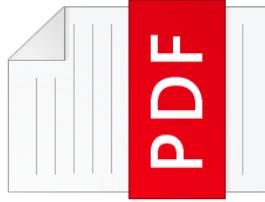
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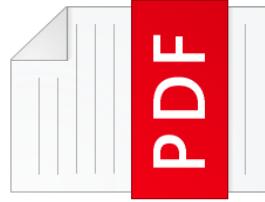
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c3.pdf



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LUJENElOtCxNjQ5NDAzQTVD.p
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UE3MDAtOEZCOTMwMUy5RtD
D.pdf

Lampiran 3 Source code

1. Pengaturan nama kelas (obj.name)

```
Akademi Keperawatan Batari Toja Watampone
AMIKOM
Institut Pertanian Bogor
STIA Puangrimaggalatung Bone
STIE AMKOP Makassar
STIE Yayasan Pendidikan Ujung Pandang
STIESIA Surabaya
STIFA
Universitas Indonesia
Universitas Klabat
Universitas Mercu Buana
Universitas Muhammadiyah Makassar
Universitas Negeri Manado
Universitas Tadulako
Universitas Teknologi Surabaya
```

2. *Training*

```
from google.colab import drive
drive.mount('/content/gdrive')

!ln -s /content/gdrive/My\ Drive/ /mydrive
!ls /mydrive

!git clone https://github.com/AlexeyAB/darknet

%cd darknet
!sed -i 's/OPENCV=0/OPENCV=1/' Makefile
!sed -i 's/GPU=0/GPU=1/' Makefile
!sed -i 's/CUDNN=0/CUDNN=1/' Makefile
!sed -i 's/CUDNN_HALF=0/CUDNN_HALF=1/' Makefile

!make

!wget
https://github.com/AlexeyAB/darknet/releases/download/darknet_yolo_v3_optimal/yolov4.weights
```

```
def imshow(path):  
    import cv2  
    import matplotlib.pyplot as plt  
    %matplotlib inline  
  
    image = cv2.imread(path)  
    height, width = image.shape[:2]  
    resized_image = cv2.resize(image, (3*width, 3*height),  
interpolation = cv2.INTER_CUBIC)  
  
    fig = plt.gcf()  
    fig.set_size_inches(18, 10)  
  
    plt.axis("off")  
    plt.imshow(cv2.cvtColor(resized_image,  
cv2.COLOR_BGR2RGB))  
    plt.show()  
  
def upload():  
    from google.colab import files  
    uploaded = files.upload()  
    for name, data in uploaded.items():  
        with open(name, 'wb') as f:  
            f.write(data)  
        print ('saved file', name)  
  
def download(path):  
    from google.colab import files  
    files.download(path)  
  
!cp /mydrive/yolov4/obj.zip ../  
!unzip ../obj.zip -d data/
```

```

!cp /mydrive/yolov4/yolov4-custom.cfg ./cfg

!cp /mydrive/yolov4/obj.names ./data
!cp /mydrive/yolov4/obj.data ./data

!cp /mydrive/yolov4/generate_train.py ./
!cp /mydrive/yolov4/generate_test.py ./

def download(path):
    from google.colab import files

    files.download(path)

!python generate_train.py
!python generate_test.py

!wget
https://github.com/AlexeyAB/darknet/releases/download/darknet_yolo_v3_optimal/yolov4.conv.137

./darknet detector train data/obj.data cfg/yolov4-
custom.cfg yolov4.conv.137 -dont_show -map

```

3. Proses *testing* gambar

```

from google.colab import drive
drive.mount('/content/gdrive')

!ln -s /content/gdrive/My\ Drive/ /mydrive
!ls /mydrive

!git clone https://github.com/AlexeyAB/darknet

%cd darknet
!sed -i 's/OPENCV=0/OPENCV=1/' Makefile
!sed -i 's/GPU=0/GPU=1/' Makefile
!sed -i 's/CUDNN=0/CUDNN=1/' Makefile

```

```

!/usr/local/cuda/bin/nvcc --version

!make

!ls /mydrive/yolov4

def download(path):
    from google.colab import files
    files.download(path)

def imShow(path):
    import cv2
    import matplotlib.pyplot as plt
    %matplotlib inline

    image = cv2.imread(path)
    height, width = image.shape[:2]
    resized_image = cv2.resize(image, (3*width,
3*height), interpolation = cv2.INTER_CUBIC)

    fig = plt.gcf()
    fig.set_size_inches(18, 10)
    plt.axis("off")
    plt.imshow(cv2.cvtColor(resized_image,
cv2.COLOR_BGR2RGB))
    plt.show()

!cp /mydrive/yolov4/backup/yolov4-
custom_last.weights ./

!cp /mydrive/yolov4//obj.names ./cfg
!cp /mydrive/yolov4/obj.data ./cfg

!cp /mydrive/yolov4/obj.names ./data
!cp /mydrive/yolov4/obj.data ./data

!cp /mydrive/yolov4/yolov4-custom.cfg ./cfg

!cp /mydrive/yolov4/obj.zip ../
!unzip ../obj.zip -d data/
!cp /mydrive/yolov4/obj.names ./cfg
!cp /mydrive/yolov4/obj.data ./cfg

!cp /mydrive/yolov4/obj.names ./data
!cp /mydrive/yolov4/obj.data ./data

!cp /mydrive/yolov4/yolov4-custom.cfg ./cfg

!cp /mydrive/yolov4/generate_test.py ./
```

```
!cp /mydrive/yolov4/generate_train.py ./
!cp /mydrive/yolov4/generate_test.py ./

!python generate_train.py
!python generate_test.py

%cd cfg
!sed -i 's/batch=64/batch=1/' yolov4-custom.cfg
!sed -i 's/subdivisions=16/subdivisions=1/' yolov4-custom.cfg
%cd ..

/content/darknet/cfg
/content/darknet

!cp /mydrive/Images/itb3.jpg ./

!./darknet detector test data/obj.data cfg/yolov4-custom.cfg      /mydrive/yolov4/backup/yolov4-custom_last.weights  /mydrive/Images/itb3.jpg  -thresh 0.3
imShow('predictions.jpg')
```