

**LAPORAN UAS PRAKTIKUM  
MATA KULIAH PENGOLAHAN GAMBAR**

**Topik Segmentasi Citra**



**PENYUSUN LAPORAN**



<b>Nama Mahasiswa</b>	<b>NIM</b>	<b>Kelas</b>
Cantika Tria Nurjannah	062340833186	1 MIN

**PROGRAM STUDI MANAJEMEN INFORMATIKA  
JURUSAN MANAJEMEN INFORMATIKA  
POLITEKNIK NEGERI SRIWIJAYA  
2024**

## 1. Langkah pertama masukkan kode pip install rembg [gpu,cli]

```
Code + Text

pip install rembg[gpu,cli]

Collecting rembg[cli,gpu]
  Downloading rembg-2.0.53-py3-none-any.whl (32 kB)
  Requirement already satisfied: jsonschema in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (4.19.2)
  Requirement already satisfied: numpy in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (1.23.5)
  Collecting onnxruntime (from rembg[cli,gpu])
    Downloading onnxruntime-1.16.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (6.4 MB)
    6.4/6.4 MB 17.0 MB/s eta 0:00:00
  Requirement already satisfied: opencv-python-headless in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (4.9.0.80)
  Requirement already satisfied: pillow in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (9.4.0)
  Requirement already satisfied: pooch in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (1.8.0)
  Collecting pymatting (from rembg[cli,gpu])
    Downloading PyMatting-1.1.12-py3-none-any.whl (52 kB)
    53.0/53.0 kB 6.2 MB/s eta 0:00:00
  Requirement already satisfied: scikit-image in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (0.19.3)
  Requirement already satisfied: scipy in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (1.11.4)
  Requirement already satisfied: tqdm in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (4.66.1)
  Collecting onnxruntime-gpu (from rembg[cli,gpu])
    Downloading onnxruntime-gpu-1.16.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (157.1 MB)
    157.1/157.1 MB 7.4 MB/s eta 0:00:00
  Requirement already satisfied: aiohttp in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (3.9.1)
  Collecting asyncer (from rembg[cli,gpu])
    Downloading asyncer-0.0.2-py3-none-any.whl (8.3 kB)
  Requirement already satisfied: click in /usr/local/lib/python3.10/dist-packages (from rembg[cli,gpu]) (8.1.7)
  Collecting fastapi (from rembg[cli,gpu])
    Downloading fastapi-0.108.0-py3-none-any.whl (92 kB)
    92.0/92.0 kB 11.0 MB/s eta 0:00:00
  Collecting filetype (from rembg[cli,gpu])
    Downloading filetype-1.2.0-py2.py3-none-any.whl (19 kB)
  Collecting gradio (from rembg[cli,gpu])
```

## 2. Setelah itu lanjut ke kode :

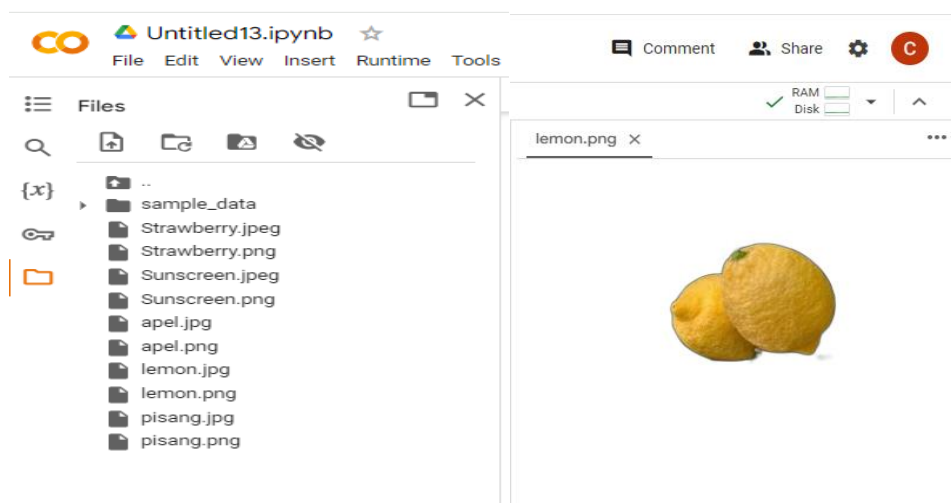
```
from rembg import remove
from PIL import Image
import cv2
```

```
from rembg import remove
from PIL import Image
import cv2

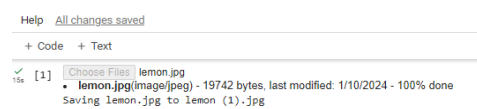
[ ] input_path = 'Sunscreen.jpeg'
    output_path = 'Sunscreen.png'

[ ] with open(input_path, 'rb') as i:
    with open(output_path, 'wb') as o:
        input = i.read()
        output = remove(input)
        o.write(output)
```

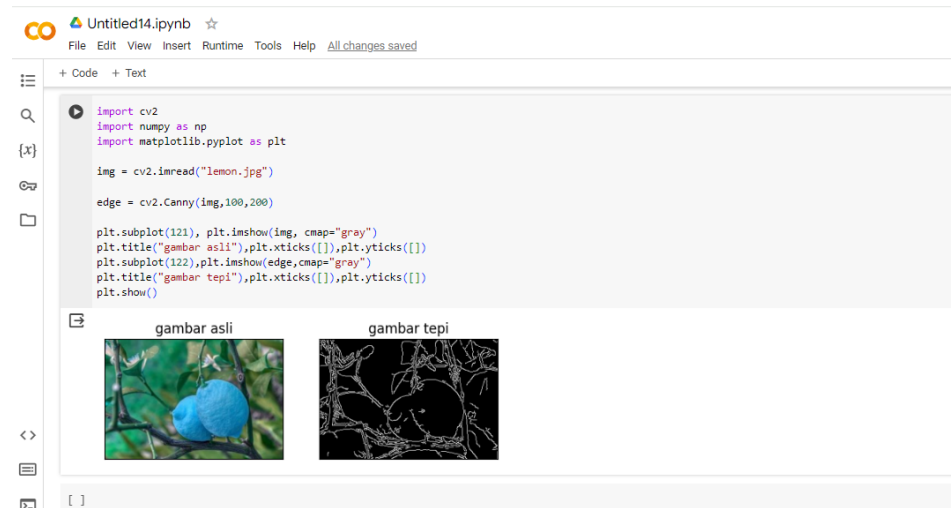
## 3. Sebelumnya kita masukkan file foto yang akan dihapus backgroundnya



## 4. Install open CV untuk mengimport gambar



## 5. Kemudian masukkan kode untuk mendeteksi gambar asli ke garis tepi



### Penjelasan :

1. `pip install rembg [gpu,cli]` digunakan untuk menginstal pustaka `rembg` beserta dukungan GPU dan antarmuka baris perintah (CLI).

2. - `from rembg import remove`: Ini mengimpor fungsi `remove` dari pustaka `rembg`. Fungsi ini adalah inti dari pustaka tersebut dan digunakan untuk menghapus latar belakang gambar.

- `from PIL import Image`: Ini mengimpor modul `Image` dari pustaka `Python Imaging Library` (PIL). Modul ini digunakan untuk memanipulasi gambar, dan mungkin digunakan di dalam kode untuk membuka atau menyimpan gambar.

- `import cv2`: Ini mengimpor pustaka `OpenCV (cv2)`: OpenCV adalah pustaka komputer vision yang sering digunakan untuk memproses gambar dan video.

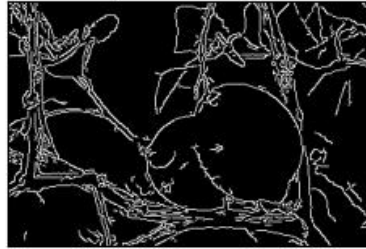
3. Menginstal OpenCV memungkinkan Anda menggunakan pustaka ini dalam proyek-proyek Python Anda. OpenCV (Open Source Computer Vision Library) adalah pustaka sumber terbuka yang menyediakan berbagai fungsi dan algoritma untuk pemrosesan gambar dan video, pengenalan pola, visi komputer, dan aplikasi terkait.

Hasil :

gambar asli



gambar tepi



gambar asli



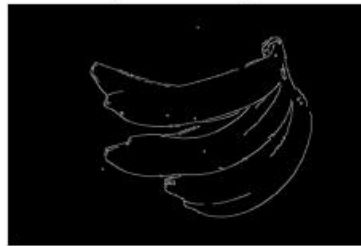
gambar tepi



gambar asli



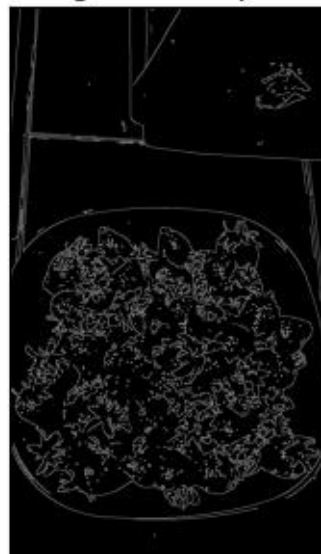
gambar tepi



gambar asli



gambar tepi



gambar asli



gambar tepi

