CARA MENJALANKAN PROGRAM

1. Buka environmental tempat menampung libraries dan pekerjaan untuk penelitian.

```
● PS D:\SKRIPSI\GVR> & d:/SKRIPSI/GVR/.venv/Scripts/Activate.ps1
● (.venv) PS D:\SKRIPSI\GVR> dir


    Directory: D:\SKRIPSI\GVR


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         7/23/2024  10:37 AM                .venv
d-----         7/22/2024  10:45 PM                dataset
d-----          9/5/2024  12:54 AM                DataUji
d-----         7/31/2024   1:50 PM                Gender_Voice_Recognition
d-----         7/28/2024  11:01 PM                MFCC_Features
d-----         8/27/2024  10:43 AM                MFCC_Features_X_Normalization
d-----          9/5/2024   9:28 AM                Model
-a----          9/5/2024  12:58 AM           1149 check_shape.ipynb
-a----          9/5/2024   9:28 AM          65674 CNN_Model.ipynb
-a----          9/2/2024   1:34 PM           7006 Convert_Sound.ipynb
-a----          9/5/2024   1:26 AM          29656 Evaluation_Model.ipynb
-a----          9/5/2024   1:10 AM          13465 MFCC.ipynb
-a----         8/29/2024   3:08 PM         146221 sample_mfcc.ipynb


○ (.venv) PS D:\SKRIPSI\GVR>
```

2. Setelah environment aktif, masuk ke direktori tempat file aplikasi web berada.

```
 (.venv) PS D:\SKRIPSI\GVR> cd .\Gender_Voice_Recognition\
● (.venv) PS D:\SKRIPSI\GVR\Gender_Voice_Recognition> dir
●

    Directory: D:\SKRIPSI\GVR\Gender_Voice_Recognition


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----          9/8/2024  11:41 AM                model
d-----         7/31/2024   1:50 PM                static
d-----          9/5/2024   1:52 AM                templates
d-----          9/5/2024   1:32 AM                uploads
-a----          9/5/2024   9:31 AM          17592 app.py
```
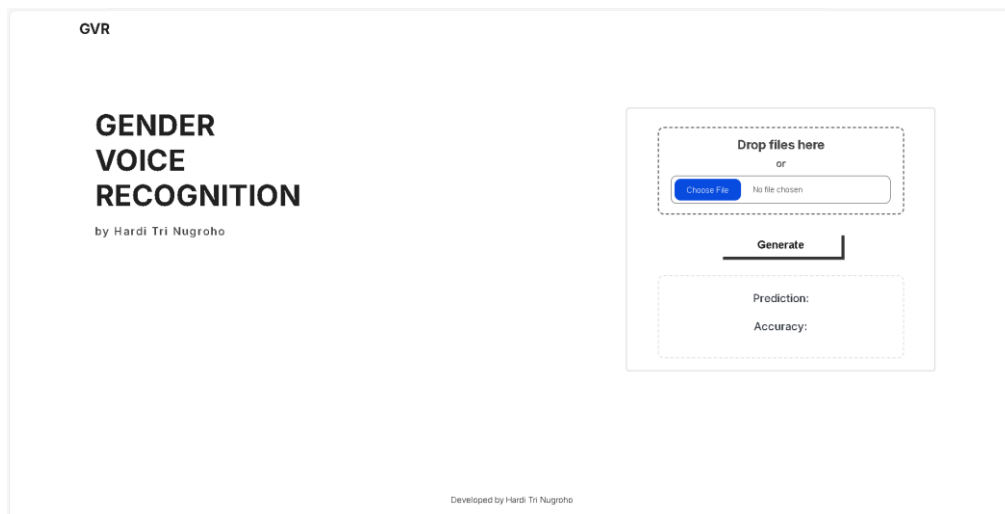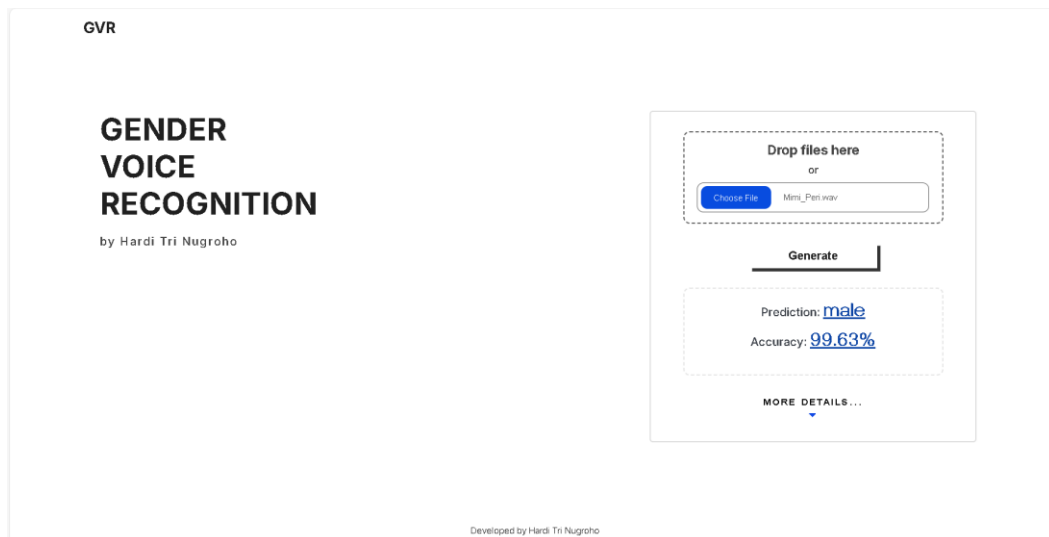
3. Jalankan aplikasi web.
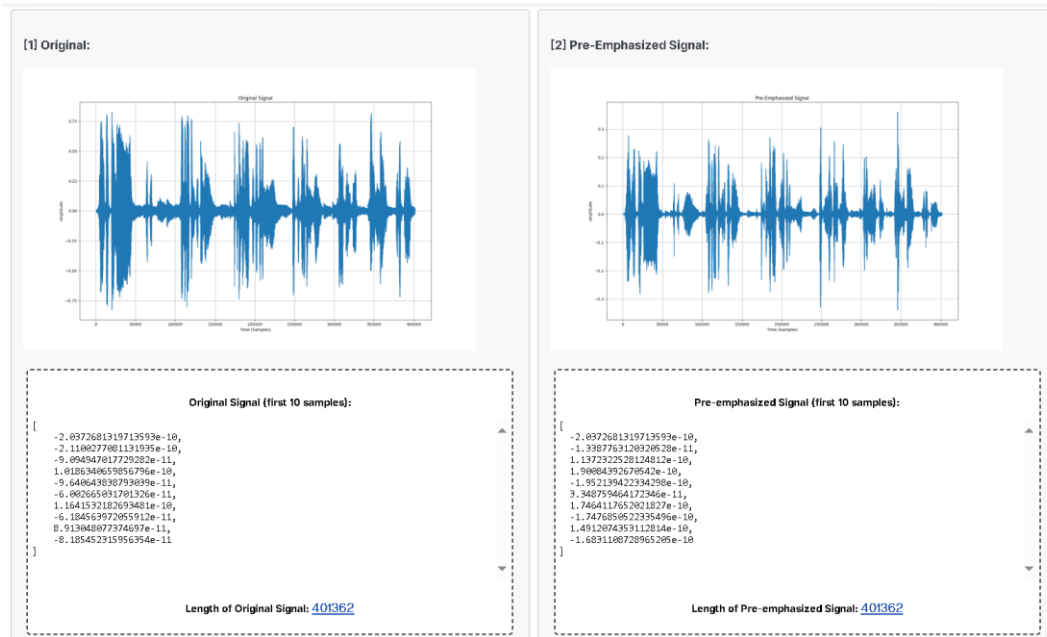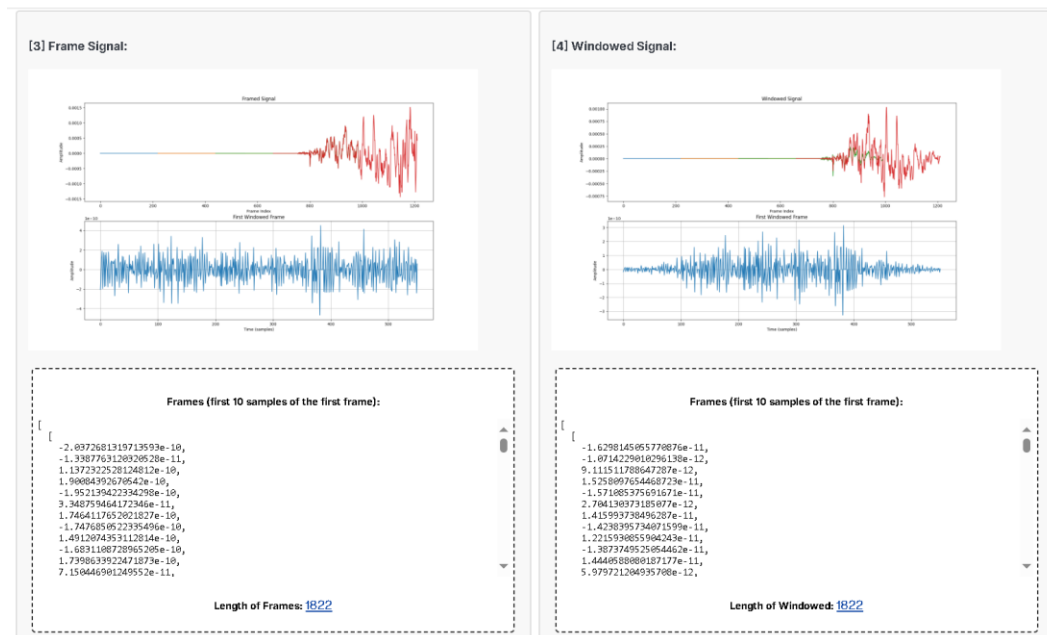

4. Buka alamat local host di browser

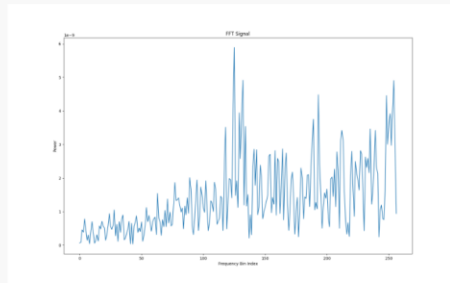5. Jalankan program kemudian upload audio dengan format .wav

6. Kemudian klik generate kemudian akan menampilkan hasil prediksi dan akurasi, serta dapat melihat proses dari ekstraksi fitur dengan menekan "more details…"

7. Menampilkan hasil dan proses ekstraksi fitur signal
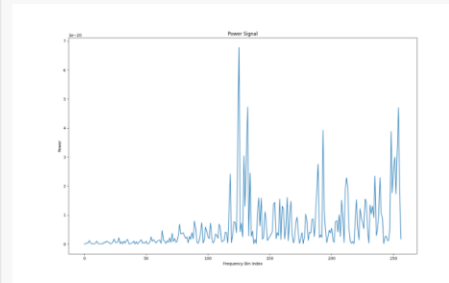
[5] FFT a Frame:

FFT Frames (first 10 samples of the first frame):

```
[
  [
    6.649688357357543e-11,
    8.623115581818116e-11,
    4.556100944376193e-10,
    3.866895045368270e-10,
    7.801885770668513e-10,
    4.694223750026290e-10,
    1.467574702394462e-10,
    3.020784305960752e-10,
    4.241393068533123e-11,
    4.090816253284e-10,
    7.006729930757000e-10,
    3.759280093082188e-10,
```

Length of FFT Frames: 1822

[6] Power Spectrum:

Power Frames (first 10 samples of the first frame):

```
[
  [
    8.636397509761027e-24,
    1.452307076902234e-23,
    4.054307776434695e-22,
    2.920483846072992e-22,
    1.188058902062465e-21,
    4.303054809144851e-22,
    4.206592787320691e-23,
    1.782253481081793e-22,
    3.513576487892220e-24,
    3.268511253427904e-22,
    9.585986691934493e-22,
    2.760193912713440e-22,
```

Length of Power Frames: 1822

[7] Filter Bank Energies:
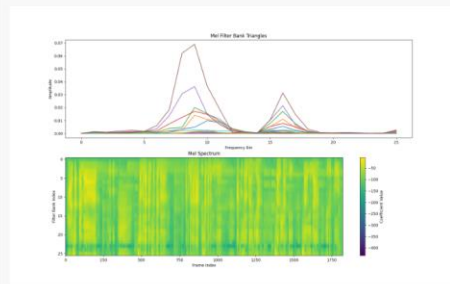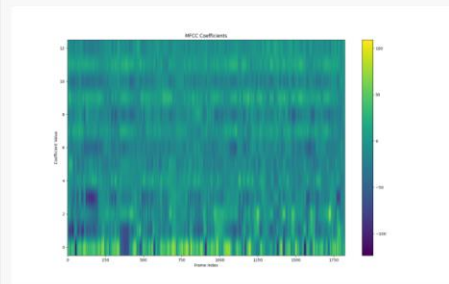

Filter Banks (first 10 samples of the first frame):

```
[
  [
    -433.26126570786676,
    -419.25791330794625,
    -419.0758281123056,
    -423.4295594094036,
    -419.6594778430101,
    -427.060002543930,
    -413.6110516967727,
    -414.46203168900005,
    -409.2198199929266,
    -400.8282764043043,
    -400.8346251329924,
    -412.2052420693604,
```

Length of Filter Banks: 1822

[8] MFCCs:

MFCC (first 10 samples of the first frame):

```
[
  [
    -91.04110201753178,
    8.231919872620566,
    -3.0740340616604604,
    -7.533757983051845,
    2.2488296652002593,
    2.773420722642794,
    -0.275370449693896,
    -2.755104952938294,
    -10.936469979666985,
    -1.416297461002183,
    -5.318419681300625,
    -2.943169450830559,
```

Length of MFCC: 1822