“InnoPlateReader”

(Implementasi YOLO & OCR Untuk Sistem Deteksi Plat Nomor)

MANUAL SISTEM DETEKSI PLAT NOMOR

Penyusun:

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Daftar Isi

Daftar Gambar

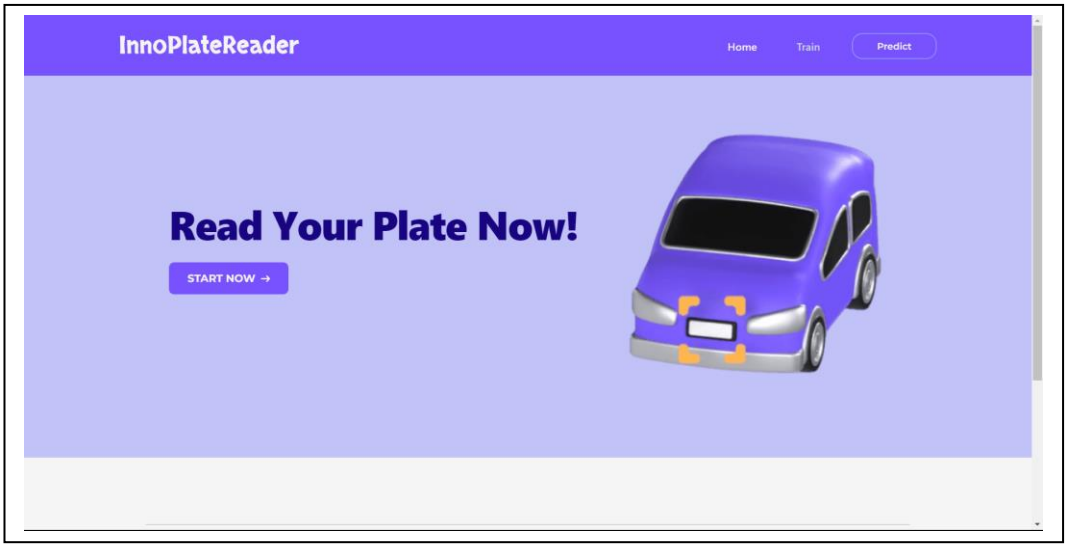
Bagian 1

Pengenalan Antar Muka Sistem

1.1 Halaman Home

Halaman beranda adalah halaman yang pertama kali muncul saat pengguna menggunakan sistem. Halaman ini memungkinkan pengguna untuk berpindah halaman 3 menu yang tersedia pada bagian navbar yaitu: Home, Train, dan Predict. Menu "Home" digunakan untuk menampilkan kembali halaman beranda ini. Sedangkan detil untuk kedua menu lainnya akan dijelaskan pada bagian berikutnya. Halaman ini juga memiliki satu tombol "Start Now" pada bagian tengah halaman yang mana merupakan shortcut untuk berpindah ke menu "Predict".

1.1.1 Tampilan Antar Muka Halaman Home



Gambar 1.1 Tampilan Halaman Beranda

1.1.2 Potongan Kode Program Halaman Home

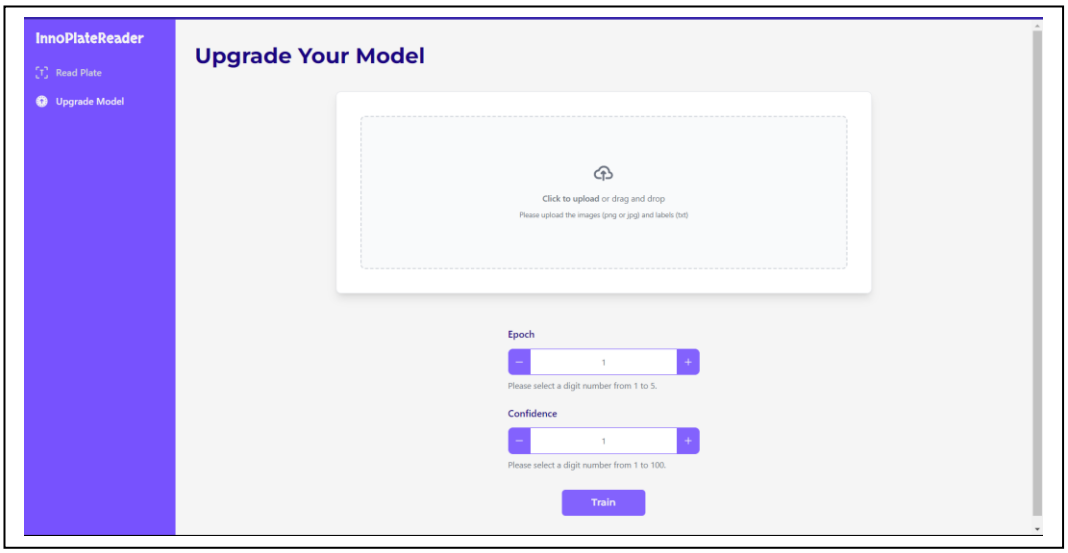
```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Home</title>
  <link rel="stylesheet" href="{{url_for('static',filename='dist/css/output.css')}}">
</head>
<body class="bg-background">

  <!-- Navbar Start -->
  <nav class="bg-primary dark:bg-primary pt-3 pb-2 px-4 lg:px-0">
    <div class="max-w-screen-xl flex flex-wrap items-center justify-between mx-auto
p-4">
      <a href="/" class="flex items-center ml-2">
        <span class="self-center text-3xl md:text-4xl font-skranji whitespace-nowrap
text-text hover:text-white duration-300">InnoPlateReader</span>
      </a>
      <button data-collapse-toggle="navbar-default" type="button" class="inline-flex
items-center p-2 w-10 h-10 justify-center text-sm text-text hover:text-primary
rounded-lg md:hidden hover:bg-background focus:outline-none focus:ring-2
focus:ring-gray-400 duration-300" aria-controls="navbar-default" aria-
expanded="false">
        <span class="sr-only">Open main menu</span>
        <svg class="w-5 h-5" aria-hidden="true"
xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 17 14">
          <path stroke="currentColor" stroke-linecap="round" stroke-
linejoin="round" stroke-width="2" d="M1 1h15M1 7h15M1 13h15"/>
        </svg>
      </button>
      <div class="hidden w-full md:block md:w-auto" id="navbar-default">
        <ul class="font-medium flex flex-col p-4 md:p-0 mt-4 border border-gray-100
rounded-lg md:flex-row md:space-x-8 md:mt-0 md:border-0">
          <li>
            <a href="/" class="block py-2 pl-3 pr-4 font-maitree font-semibold text-
text hover:text-white bg-secondary duration-300 rounded  md:bg-transparent " aria-
current="page">
              Home
            </a>
          </li>
          <li>
            <a href="/about" class="block py-2 pl-3 pr-4 font-maitree font-semibold
text-slate-300 hover:text-white hover:bg-secondary duration-300 rounded md:bg-
transparent hover:md:bg-transparent " aria-current="page">
```

1.2 Halaman Train

Halaman pelatihan dapat diakses oleh pengguna dengan memilih menu “Train” pada navbar halaman Home. Halaman ini digunakan untuk menjalankan tahap pelatihan pada YOLO yang akan digunakan untuk melakukan pengenalan objek dan nantinya akan dibantu oleh EASYOCR untuk melakukan pembacaan karakter plat. Pengguna harus melakukan upload file data citra kendaraan dan data label dari plat nomernya. Selain itu, ada beberapa hyperparameter yang perlu diisikan oleh pengguna antara lain: epoch dan confidence. Nilai pada epoch menunjukkan maksimum epoch yang akan dijalankan selama tahap pelatihan. Nilai confidence menunjukkan nilai probabilitas bounding box yang mendeteksi sebuah objek.

1.2.1 Tampilan Antar Muka Halaman Train



Gambar 1.2 Tampilan Halaman Train

1.2.2 Potongan Kode Program Halaman Train

```
<!-- Main Start -->
   <section class="p-4 sm:ml-64">
      <div class="p-4">
         <h2 id="sub-header" class="text-3xl md:text-4xl font-montserrat font-bold text-
accent mt-2 ">Upgrade Your Model</h2>

         <!-- File Upload -->
         <div class="max-w-sm md:max-w-xl lg:max-w-4xl min-h-fit p-8 bg-white
border border-gray-200 rounded-lg shadow-lg md:p-10 mx-auto mt-10">
            <div class="flex flex-col items-center justify-center w-full">
               <label id="label-dropzone" for="dropzone-file" class="relative flex flex-col
items-center justify-center w-full h-64 border-2 border-gray-300 border-dashed
rounded-lg cursor-pointer bg-gray-50 hover:bg-gray-100">
                  <div id="tampilan-input-awal" class="opacity-100 flex flex-col items-
center justify-center pt-5 pb-6">
                     <svg class="w-8 h-8 mb-4 text-gray-500 dark:text-gray-400" aria-
hidden="true" xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 20 16">
                        <path stroke="currentColor" stroke-linecap="round" stroke-
linejoin="round" stroke-width="2" d="M13 13h3a3 3 0 0 0 0-6h-.025A5.56 5.56 0 0 0 16
6.5 5.5 5.5 0 0 0 5.207 5.021C5.137 5.017 5.071 5 5 5a4 4 0 0 0 0 8h2.167M10 15V6m0 0L8
8m2-2 2 2"/>
                     </svg>
                     <p class="mb-2 text-sm text-gray-500 dark:text-gray-400"><span
class="font-semibold">Click to upload</span> or drag and drop</p>
                     <p class="text-xs text-gray-500 dark:text-gray-400">Please upload the
images (png or jpg) and labels (txt)</p>
                  </div>
                  <!-- <input id="dropzone-file" type="file" name="input-image"
class="absolute top-0 left-0 w-full h-full opacity-0 cursor-pointer" /> -->
                  <div id="tampilan-input-akhir" class="opacity-0 absolute top-0 left-0 flex
items-center justify-center w-full h-full font-medium text-sm text-gray-400">
                     {{ dropzone.create(action='upload_train') }}
                     {{ dropzone.load_js() }}
                     {{ dropzone.style('width: 100%; height: 100%; text-align:center;
vertical-align: middle; border: none; overflow-y: scroll') }}
                  </div>
               </label>
            </div>
         </div>

         <!-- Hyperparameter -->
         <div class="max-w-sm min-h-fit py-4 px-8 mx-auto mt-10">
            <form action="/train-model" method="POST">
```

```
            <label for="epoch" class="block mb-3 text-base font-medium text-
accent">Epoch</label>
            <div class="relative flex items-center">
              <button type="button" id="decrement-button" data-input-counter-
decrement="epoch" class="bg-primary opacity-90 hover:opacity-100 border border-
primary rounded-s-lg p-3 h-11 focus:ring-primary focus:ring-2 focus:outline-none">
                <svg class="w-3 h-3 text-text hover:text-white" aria-hidden="true"
xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 18 2">
                  <path stroke="currentColor" stroke-linecap="round" stroke-
linejoin="round" stroke-width="2" d="M1 1h16"/>
                </svg>
              </button>
              <input type="text" id="epoch" name="epoch" data-input-counter data-
input-counter-min="1" data-input-counter-max="5" aria-describedby="helper-text-
explanation" class="bg-white border-x-0 border-primary h-11 text-center text-primary
text-sm focus:ring-primary focus:border-primaring-primary block w-full py-2.5"
placeholder="1" required>
              <button type="button" id="increment-button" data-input-counter-
increment="epoch" class="bg-primary opacity-90 hover:opacity-100 border border-
primary rounded-e-lg p-3 h-11 focus:ring-primary focus:ring-2 focus:outline-none">
                <svg class="w-3 h-3 text-text hover:text-white" aria-hidden="true"
xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 18 18">
                  <path stroke="currentColor" stroke-linecap="round" stroke-
linejoin="round" stroke-width="2" d="M9 1v16M1 9h16"/>
                </svg>
              </button>
            </div>
            <p id="helper-text-explanation" class="mt-2 mb-4 md:mb-6 text-sm text-
gray-500">Please select a digit number from 1 to 5.</p>
            <label for="confidence" class="block mb-3 text-base font-medium text-
accent">Confidence</label>
            <div class="relative flex items-center">
              <button type="button" id="decrement-button" data-input-counter-
decrement="confidence" class="bg-primary opacity-90 hover:opacity-100 border
border-primary rounded-s-lg p-3 h-11 focus:ring-primary focus:ring-2 focus:outline-
none">
                <svg class="w-3 h-3 text-text hover:text-white" aria-hidden="true"
xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 18 2">
                  <path stroke="currentColor" stroke-linecap="round" stroke-
linejoin="round" stroke-width="2" d="M1 1h16"/>
                </svg>
              </button>
              <input type="text" id="confidence" name="confidence" data-input-
counter data-input-counter-min="1" data-input-counter-max="100" aria-
describedby="helper-text-explanation" class="bg-white border-x-0 border-primary h-
11 text-center text-primary text-sm focus:ring-primary focus:border-primaring-
primary block w-full py-2.5" placeholder="1" required>
```

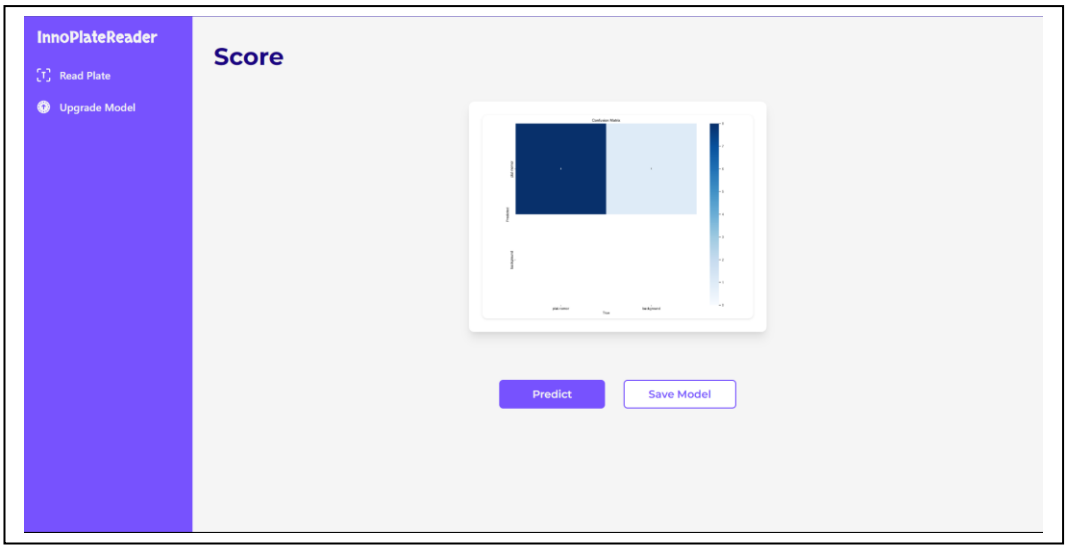
```
                <button type="button" id="increment-button" data-input-counter-increment="confidence" class="bg-primary opacity-90 hover:opacity-100 border border-primary rounded-e-lg p-3 h-11 focus:ring-primary focus:ring-2 focus:outline-none">
                    <svg class="w-3 h-3 text-text hover:text-white" aria-hidden="true" xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 18 18">
                        <path stroke="currentColor" stroke-linecap="round" stroke-linejoin="round" stroke-width="2" d="M9 1v16M1 9h16"/>
                    </svg>
                </button>
            </div>
            <p id="helper-text-explanation" class="mt-2 mb-4 md:mb-6 text-sm text-gray-500">Please select a digit number from 1 to 100.</p>

            <input id="start-train" type="hidden" name="start-train" value="False">
            <div class="mt-6 md:mt-8 text-center">
                <button type="submit" class="text-base text-center font-semibold rounded-md font-montserrat px-12 py-2 duration-300 text-text hover:text-white bg-primary opacity-90 hover:opacity-100 border-primary border-2 focus:ring-4 focus:outline-none focus:ring-primary">
                    Train
                </button>
            </div>
        </form>
    </div>
  </div>
 </section>
 <!-- Main End -->
```

1.3 Halaman Hasil Train

Halaman hasil pelatihan adalah halaman yang akan muncul setelah pengguna melakukan training pada halaman Train. Halaman ini berisi gambar confusion matrix dari hasil training model YOLO. Pada halaman ini juga terdapat tombol “Predict” dan tombol “Save Model”. Tombol “Predict” akan mengarah ke halaman Predict. Sedangkan tombol “Save Model” berfungsi untuk menyimpan model yang telah dilatih sebelumnya. Gambar 1.3 berikut merupakan tampilan dari halaman hasil train.

1.3.1 Tampilan Antar Muka Halaman Hasil Train



Gambar 1.3 Tampilan Halaman Hasil Train

1.3.2 Potongan Kode Program Halaman Hasil Train

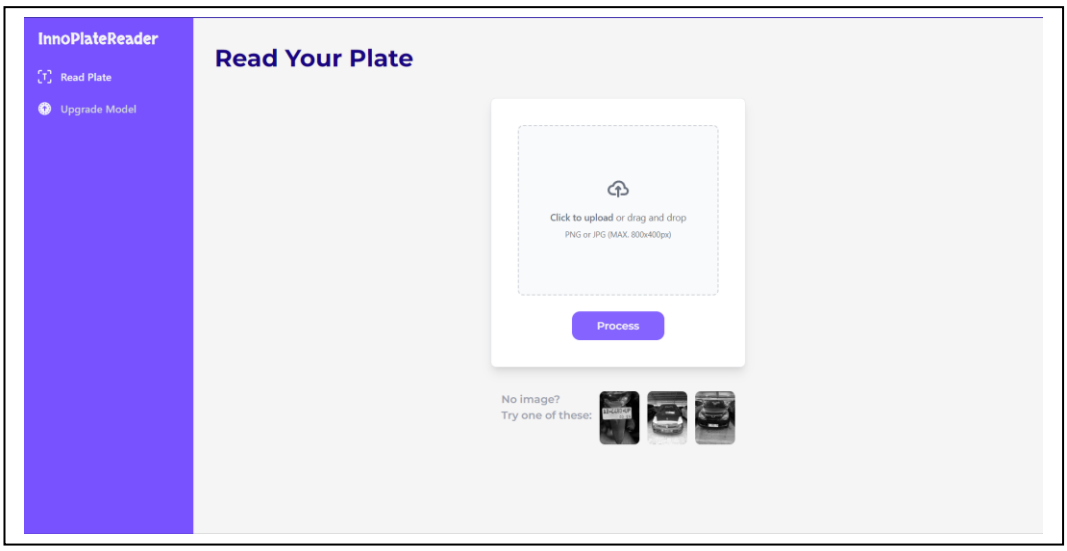
```
  <!-- Main Start -->
  <section class="p-4 sm:ml-64">
    <div class="p-4 ">
      <!-- Header -->
      <h2 class="text-3xl md:text-4xl font-montserrat font-bold text-accent mt-2
">Score</h2>
      <!-- Images -->
      <div class="w-full mx-auto py-4 flex flex-col justify-between">
        <!-- Score Image -->
        <div class="mx-auto my-4 md:my-6 lg:my-8">
          <div class="max-w-md p-4 lg:p-5 mx-auto bg-white rounded-lg shadow-
lg">
            <!-- <img class="transition-all duration-300 rounded-lg" src="{{ plotTrain
}}" alt="Plot Train"> -->
            <img class="transition-all duration-300 rounded-lg shadow
hover:shadow-lg md:hover:shadow-xl hover:shadow-gray-300 ease-in-out
md:hover:scale-125 lg:hover:scale-150" src="{{ plotTrain }}" alt="Plot Train">
          </div>
        </div>
      </div>

      <!-- Result Train -->
      <div class="max-w-sm mx-auto">
        <div class="w-full mx-auto flex flex-col md:flex-row mt-2 md:mt-0 justify-
center md:justify-around">
          <a href="/read-plate" class="w-fit mx-auto text-base text-center font-
semibold rounded-md font-montserrat px-12 py-2 mt-4 md:mt-6 duration-300 text-
text hover:text-white bg-primary border-primary border-2 focus:ring-4 focus:outline-
none focus:ring-primary">
            Predict
          </a>
          <a href="/save-model" class="w-fit mx-auto text-base text-center font-
semibold rounded-md font-montserrat px-9 py-2 mt-4 md:mt-6 duration-300 text-
primary hover:text-white bg-white hover:bg-primary border-primary border-2
focus:ring-4 focus:outline-none focus:ring-primary">
            Save Model
          </a>
        </div>
      </div>
    </div>
  </section>
  <!-- Main End -->
```

1.4 Halaman Predict

Halaman predict adalah halaman yang digunakan untuk menguji model yang telah dilatih sebelumnya. Pengguna dapat mengakses halaman ini melalui du acara yaitu menggunakan menu Predict yang ada pada bagian atas pada halaman home atau melalu tombol "Start Now" yang ada pada halaman beranda. Pada halaman ini, pengguna harus melakukan upload citra kendaraan yang akan diujikan. Setelah itu, untuk memulai pengujiannya, pengguna harus menekan tombol "Process". Setelah prosesnya selesai, maka sistem akan menampilkan halaman hasil predict.

1.4.1 Tampilan Antar Muka Halaman Predict



Gambar 1.4 Tampilan Halaman Predict

1.4.2 Potongan Kode Program Halaman Predict

```
<!-- Main Start -->
   <section class="p-4 sm:ml-64">
      <div class="p-4">
         <h2 class="text-3xl md:text-4xl font-montserrat font-bold text-accent mt-2 
">Read Your Plate  </h2>
         <!-- File Upload -->
         <div class="w-full max-w-sm min-h-fit p-8 bg-white border border-gray-200 
rounded-lg shadow-lg md:p-10 mx-auto mt-10">
            <div class="flex flex-col items-center justify-center w-full">
               <label for="dropzone-file" class="relative flex flex-col items-center justify-
center w-full h-64 border-2 border-gray-300 border-dashed rounded-lg cursor-pointer 
bg-gray-50 hover:bg-gray-100">
                  <div id="tampilan-input-awal" class="opacity-100 flex flex-col items-
center justify-center pt-5 pb-6">
                     <svg class="w-8 h-8 mb-4 text-gray-500 dark:text-gray-400" aria-
hidden="true" xmlns="http://www.w3.org/2000/svg" fill="none" viewBox="0 0 20 16">
                        <path stroke="currentColor" stroke-linecap="round" stroke-
linejoin="round" stroke-width="2" d="M13 13h3a3 3 0 0 0 0-6h-.025A5.56 5.56 0 0 0 16 
6.5 5.5 5.5 0 0 0 5.207 5.021C5.137 5.017 5.071 5 5 5a4 4 0 0 0 0 8h2.167M10 15V6m0 0L8 
8m2-2 2 2"/>
                     </svg>
                     <p class="mb-2 text-sm text-gray-500 dark:text-gray-400"><span 
class="font-semibold">Click to upload</span> or drag and drop</p>
                     <p class="text-xs text-gray-500 dark:text-gray-400">PNG or JPG (MAX. 
800x400px)</p>
                  </div>
                  <!-- <input id="dropzone-file" type="file" name="input-image" 
class="absolute top-0 left-0 w-full h-full opacity-0 cursor-pointer" /> -->
                  <div id="tampilan-input-akhir" class="opacity-0 absolute top-0 left-0 flex 
items-center justify-center w-full h-full font-medium text-sm text-gray-400">
                     {{ dropzone.create(action='upload') }}
                     {{ dropzone.load_js() }}
                     {{ dropzone.style('width: 100%; height: 100%; text-align:center; 
vertical-align: middle; border: none;') }}
                  </div>
               </label>
```

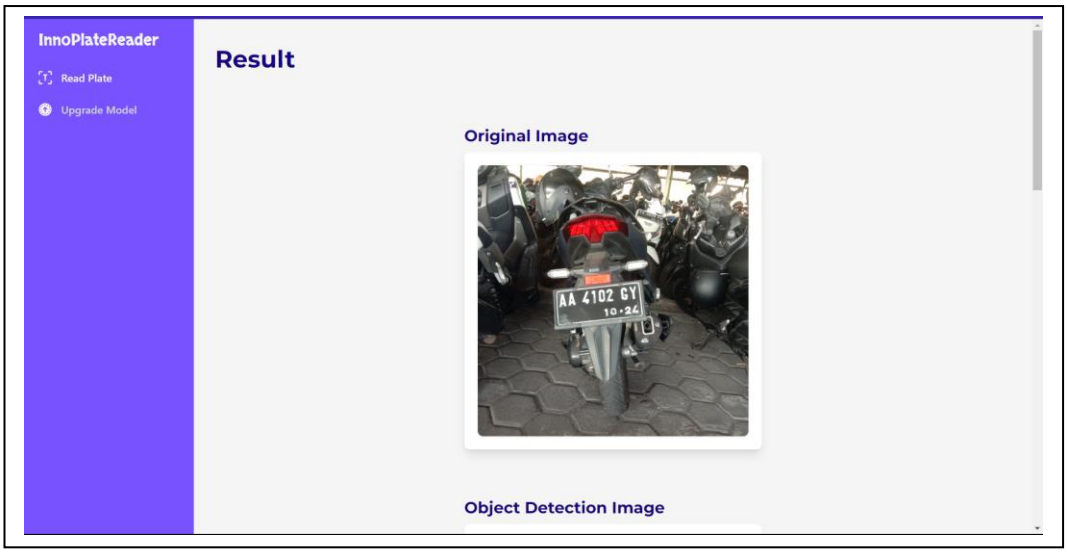
```
            <form action="/result" method="POST">
              <input type="hidden" name="start-process-read" value="True">
              <button type="submit" class="text-base text-center font-semibold
rounded-xl font-montserrat px-9 py-2 mt-4 md:mt-6 duration-300 text-text hover:text-
white bg-primary opacity-90 hover:opacity-100 border-primary border-2 focus:ring-4
focus:outline-none focus:ring-primary">
                Process
              </button>
            </form>
          </div>
        </div>

        <!-- Another Images -->
        <div class="flex flex-row justify-between mt-5 mx-auto p-4 w-full max-w-sm">
          <p class="flex flex-col font-montserrat font-semibold text-sm md:text-base
text-gray-400">
            <span>No image?</span>
            <span>Try one of these:</span>
          </p>
          <div class="flex flex-row space-x-3">
            <a href="/example-1" class="w-[60px] h-[100px]">
              <img class="transition-all duration-300 rounded-lg cursor-pointer filter
grayscale hover:grayscale-0" src="{{
url_for('static',filename='images/example/K2_AB4480UP.jpg') }}" alt="Example 1">
            </a>
            <a href="/example-2" class="w-[60px] h-[100px]">
              <img class="transition-all duration-300 rounded-lg cursor-pointer filter
grayscale hover:grayscale-0" src="{{
url_for('static',filename='images/example/K3_AB1510BA.jpg') }}" alt="Example 2">
            </a>
```

1.5 Halaman Hasil Predict

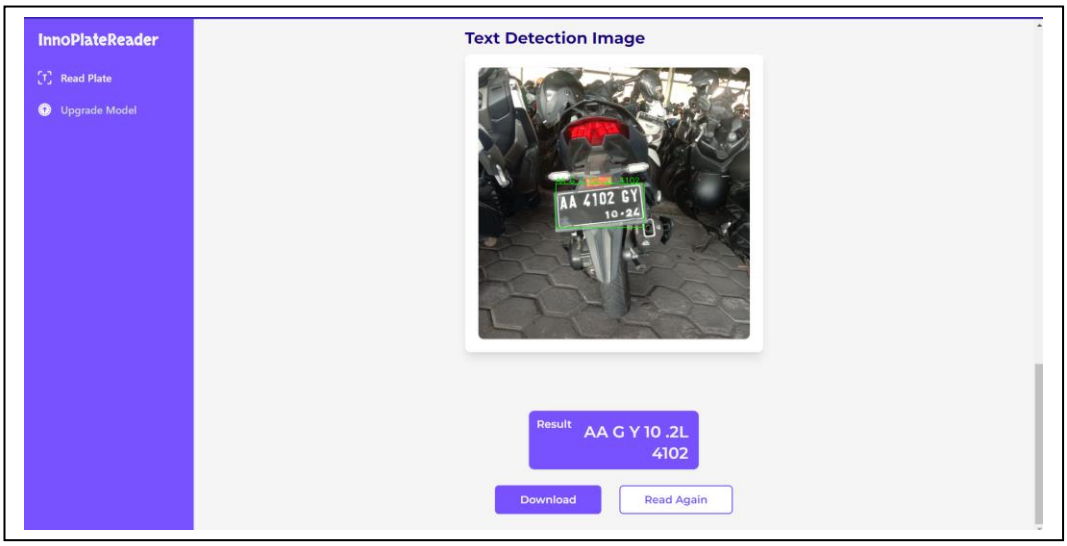
Halaman hasil predict adalah halaman yang menampilkan hasil dari proses-proses selama melakukan pengujian. Dimana pada halaman ini akan menampilkan citra asil, citra hasil deteksi objek, citra hasil crop objek, dan citra hasil teks deteksi, serta hasil teks plat nomer. Pada halaman ini juga terdapat tombol “Download” dan “Read Again”. Tombol “Download” berfungsi untuk melakukan download dari hasil deteksi. Sedangkan tombol “Read Again” berfungsi untuk kembali ke halaman predict.

1.5.1 Tampilan Antar Muka Halaman Hasil Predict



Gambar 1.5 Tampilan Halaman Hasil Predict (Bagian 1)

Gambar 1.6 Tampilan Halaman Hasil Predict (Bagian 2)



Gambar 1.7 Tampilan Halaman Hasil Predict (Bagian 3)

1.5.2 Potongan Kode Program Halaman Hasil Predict

```
<!-- Main Start -->
  <section class="p-4 sm:ml-64">
    <div class="p-4 ">
      <!-- Header -->
      <h2 class="text-3xl md:text-4xl font-montserrat font-bold text-accent mt-2
">Result</h2>
      <!-- Images -->
      <div class="w-full mx-auto py-10 flex flex-col justify-between sm:border-slate-
500 md:border-blue-500 lg:border-rose-500">
        <!-- Original Image -->
        <div class="mx-auto my-4 md:my-6 lg:my-8">
          <h3 class="text-xl md:text-2xl font-montserrat font-bold text-accent my-
2">Original Image</h3>
          <div class="max-w-md p-4 lg:p-5 mx-auto bg-white rounded-lg shadow-
lg">
            <!-- <img class="transition-all duration-300 rounded-lg shadow
hover:shadow-lg md:hover:shadow-xl hover:shadow-gray-300 ease-in-out
md:hover:scale-125" src="{{
url_for('static',filename='images/predict/TD_K1_AA2503XT.JPG') }}" alt="Original
Image"> -->
            <img class="transition-all duration-300 rounded-lg shadow
hover:shadow-lg md:hover:shadow-xl hover:shadow-gray-300 ease-in-out
md:hover:scale-125" src="{{ filepath }}" alt="Original Image">
          </div>
```

```
            </div>
            <!-- Object Detection Image -->
            <div class="mx-auto my-4 md:my-6 lg:my-8">
              <h3 class="text-xl md:text-2xl font-montserrat font-bold text-accent my-
2">Object Detection Image</h3>
              <div class="max-w-md p-4 lg:p-5 mx-auto bg-white rounded-lg shadow-
lg">
                <img class="transition-all duration-300 rounded-lg shadow
hover:shadow-lg md:hover:shadow-xl hover:shadow-gray-300 ease-in-out
md:hover:scale-125" src="{{ pathOB }}" alt="Object Detection Image">
              </div>
            </div>
            <!-- Crop Object -->
            <div class="mx-auto my-4 md:my-6 lg:my-8">
              <h3 class="text-xl md:text-2xl font-montserrat font-bold text-accent my-
2">Crop Object</h3>
              <div class="max-w-md p-4 lg:p-5 mx-auto bg-white rounded-lg shadow-
lg">
                <img class="transition-all duration-300 rounded-lg shadow
hover:shadow-lg md:hover:shadow-xl hover:shadow-gray-300 ease-in-out
md:hover:scale-125" src="{{ pathCrop }}" alt="Crop Object Image">
              </div>
            </div>
            <!-- Text Detection Image -->
            <div class="mx-auto my-4 md:my-6 lg:my-8">
              <h3 class="text-xl md:text-2xl font-montserrat font-bold text-accent my-
2">Text Detection Image</h3>
              <div class="max-w-md p-4 lg:p-5 mx-auto bg-white rounded-lg shadow-
lg">
                <img class="transition-all duration-300 rounded-lg shadow
hover:shadow-lg md:hover:shadow-xl hover:shadow-gray-300 ease-in-out
md:hover:scale-125" src="{{ pathTD }}" alt="Text Detection Image">
              </div>
            </div>

          </div>

          <!-- Result Plate -->
          <div class="max-w-sm mx-auto">
            <!-- Result -->
            <div class="w-2/3 flex flex-row justify-between lg:mt-4 mx-auto p-4 bg-
primary rounded-lg shadow hover:shadow-lg md:hover:shadow-xl hover:shadow-
gray-300 hover:border-primary transition duration-300 ease-in-out md:hover:scale-
125 text-text hover:text-white font-montserrat font-semibold">
```

```
            <h3 class="text-base -mt-2 -ml-1">Result</h3>
            <p class="text-right text-xl lg:text-2xl -mb-2">{{ result_text_plate }}</p>
            <!-- <p class="text-right text-xl lg:text-2xl -mb-2">AA2503XT</p> -->
          </div>
          <!-- More -->
          <div class="w-full mx-auto flex flex-col md:flex-row mt-2 md:mt-0 justify-
center md:justify-around">
            <a href="/download-result" class="w-fit mx-auto text-base text-center font-
semibold rounded-md font-montserrat px-9 py-2 mt-4 md:mt-6 duration-300 text-text
hover:text-white bg-primary border-primary border-2 focus:ring-4 focus:outline-none
focus:ring-primary">
              Download
            </a>
            <a href="/read-again" class="w-fit mx-auto text-base text-center font-
semibold rounded-md font-montserrat px-9 py-2 mt-4 md:mt-6 duration-300 text-
primary hover:text-white bg-white hover:bg-primary border-primary border-2
focus:ring-4 focus:outline-none focus:ring-primary">
              Read Again
            </a>
          </div>

        </div>
      </div>
    </section>
    <!-- Main End -->
```

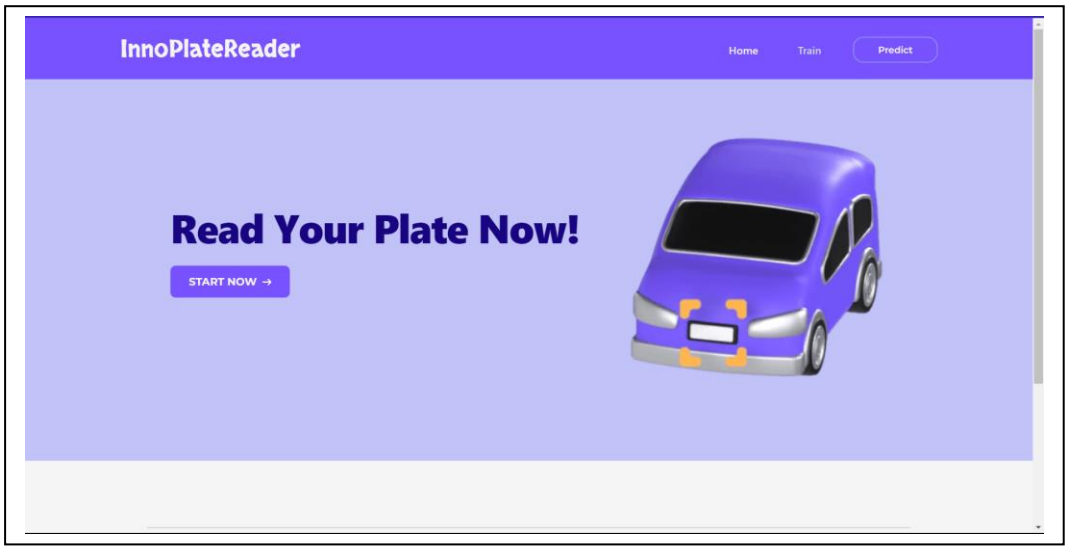
Bagian 2

Manual Penggunaan Sistem

2.1 Step by step Proses Training

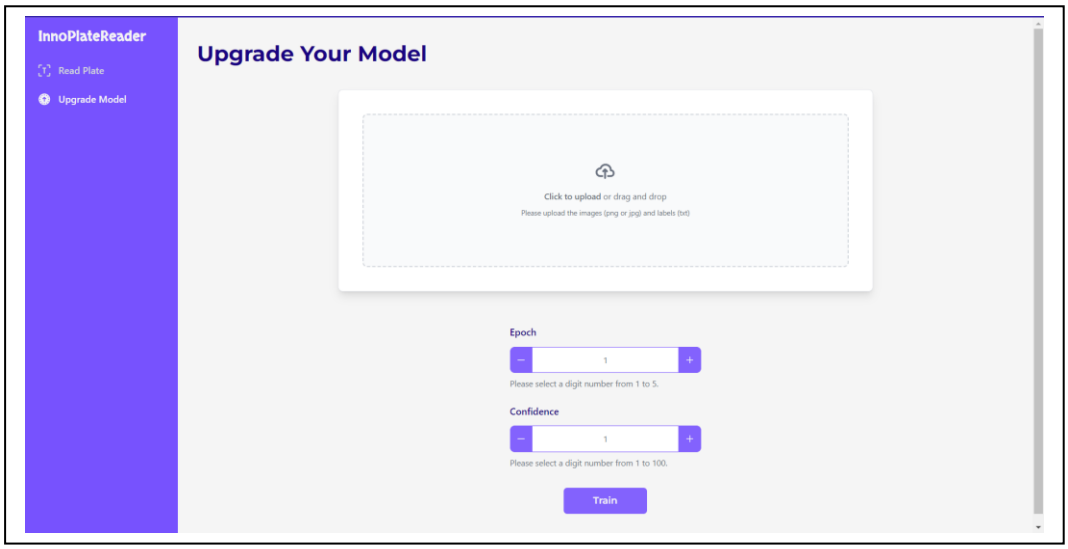
Langkah-langkah untuk melakukan pelatihan pada sistem yang dibuat adalah sebagai berikut.

1. Buka sistem hingga halaman beranda muncul.

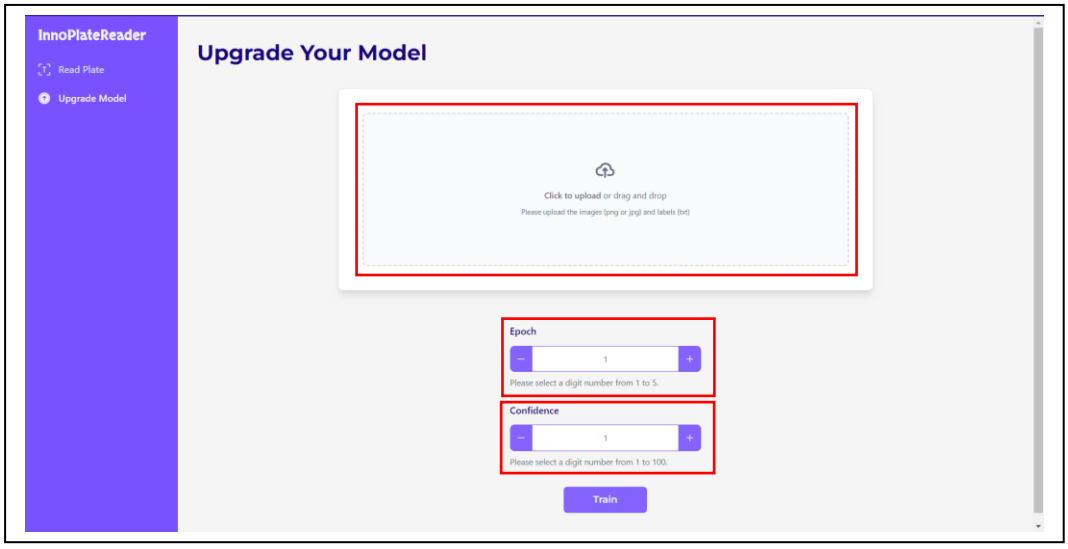


2. Pilih menu “Train” pada bagian atas (kotak merah nomor 1).

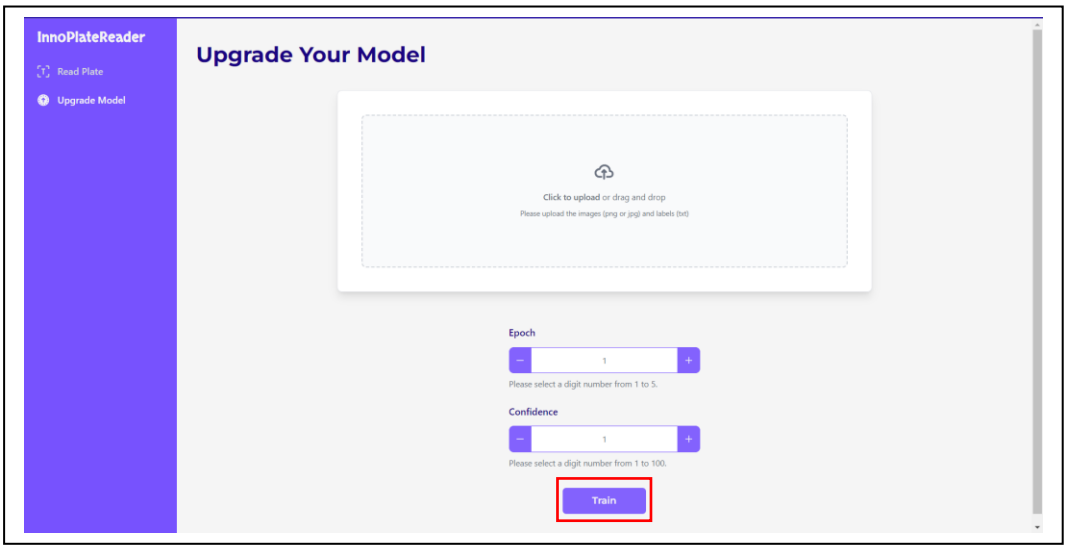
3. Tunggu hingga halaman pelatihan muncul.



4. Inputkan data citra dan label, serta seluruh nilai hyperparameter yang diminta yakni epoch dan confidence.



5. Klik tombol “Train” (kotak merah).

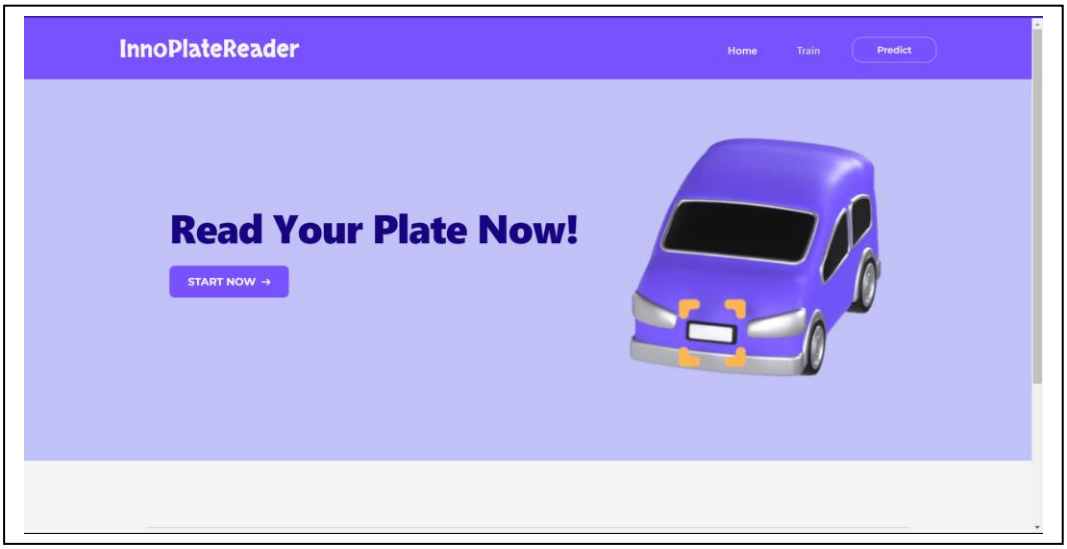


6. Proses pelatihan selesai ditandai dengan tampilnya grafik hasil pelatihan, yakni grafik confusion matrix (kotak merah).

2.2 Step by step Proses Predict

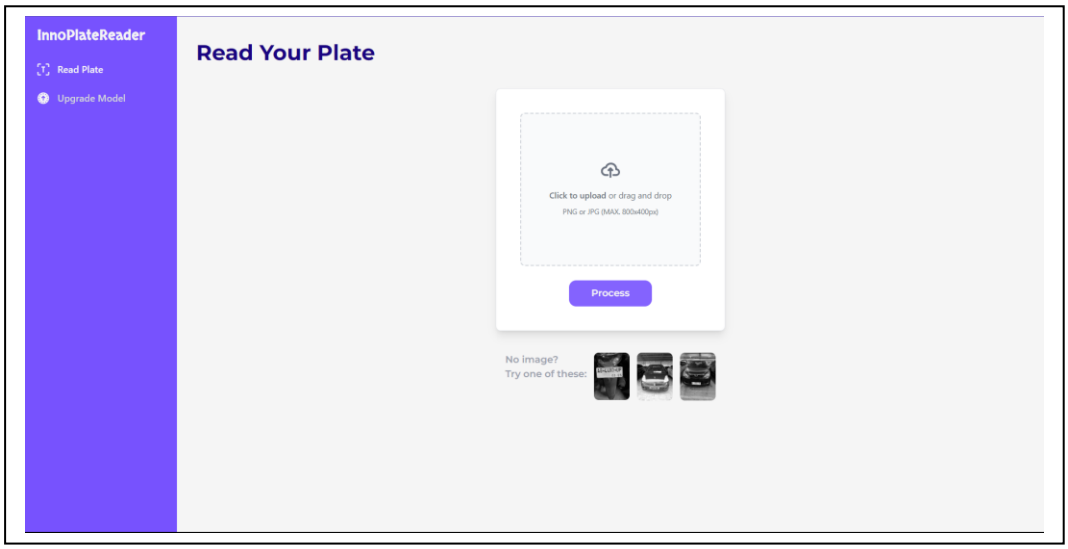
Langkah-langkah untuk melakukan pengujian atau prediksi pada sistem yang dibuat adalah sebagai berikut.

1. Buka sistem hingga halaman beranda muncul.

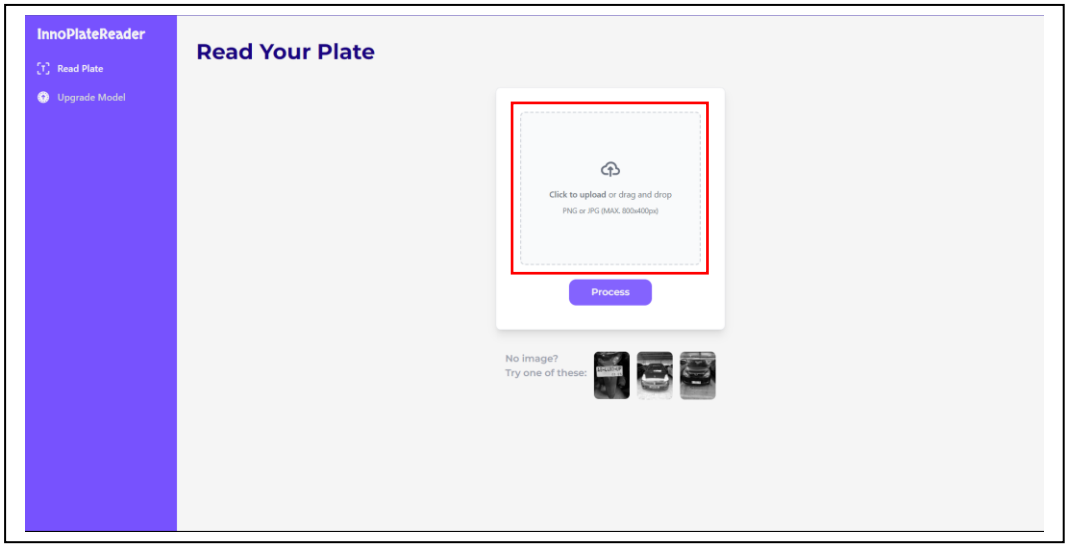


2. Pilih menu “Predict” pada bagian atas atau klik tombol “Start Now”.

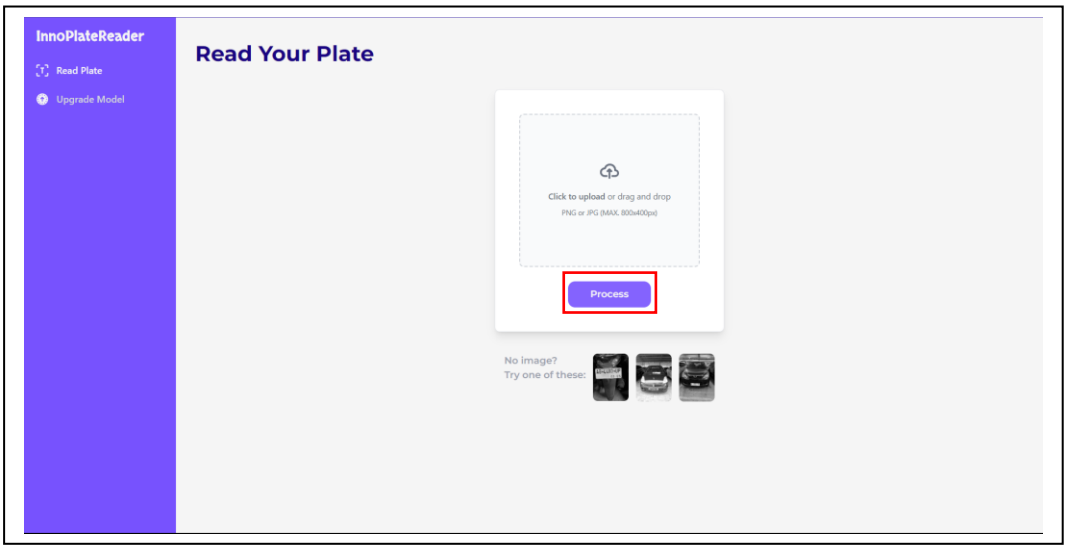
3. Tunggu hingga halaman predict muncul.



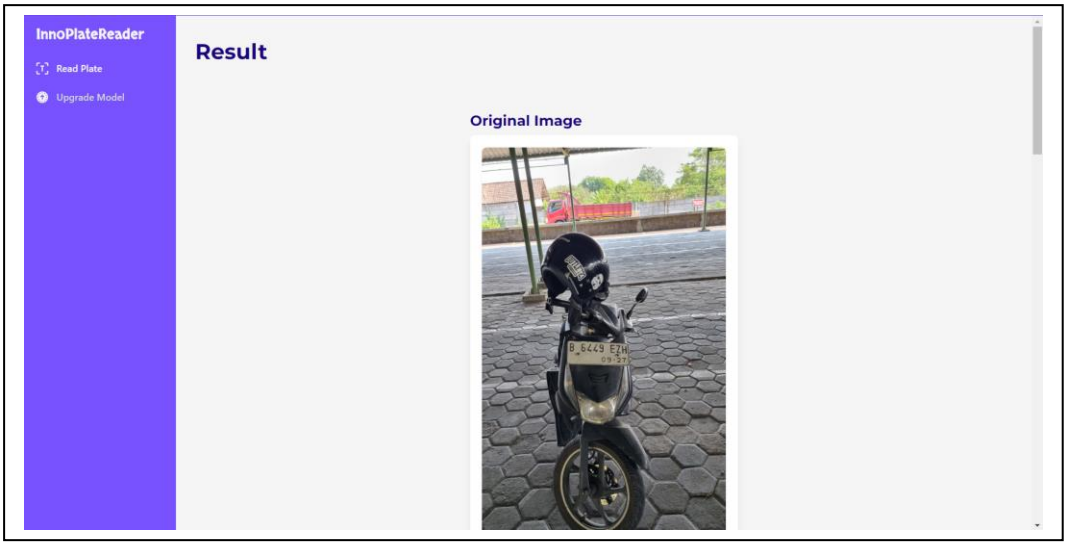
4. Lakukan upload citra yang akan diuji, dengan mengeklik area dropzone atau dengan melakukan drag and drop file citra uji.

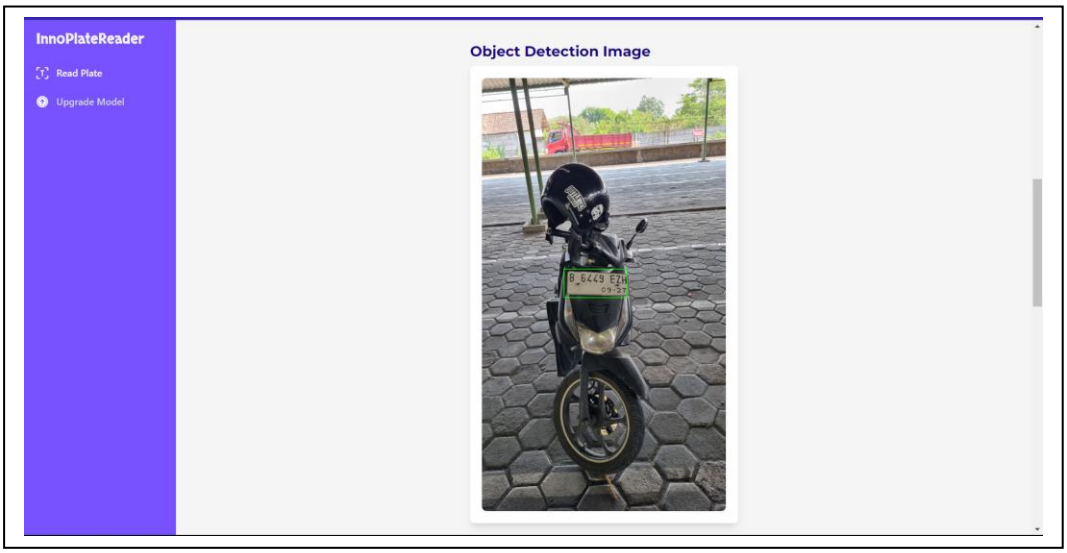


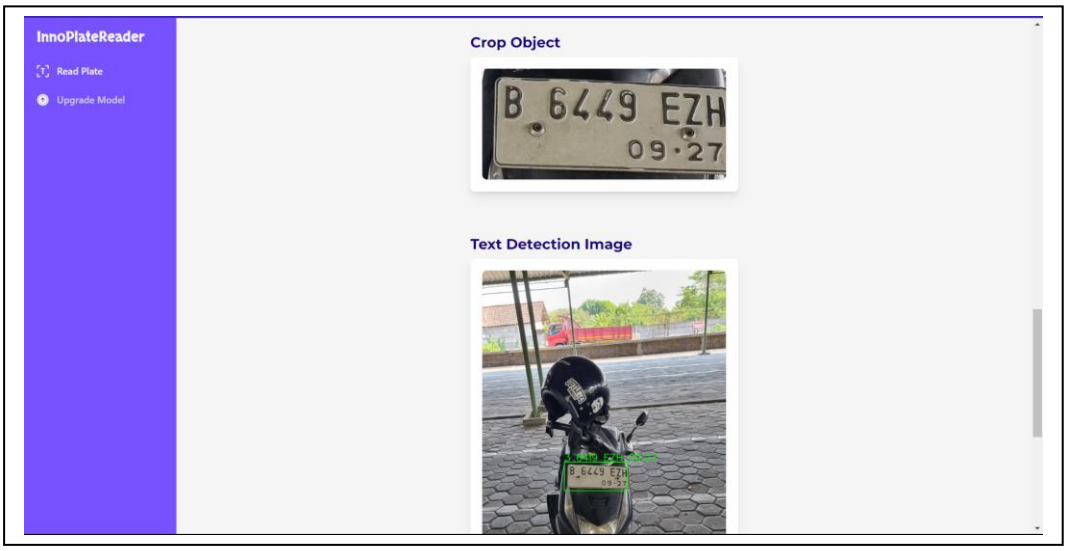
5. Jika citra uji sudah dipilih, maka selanjutnya tekan tombol “Process” untuk memulai proses prediksi.

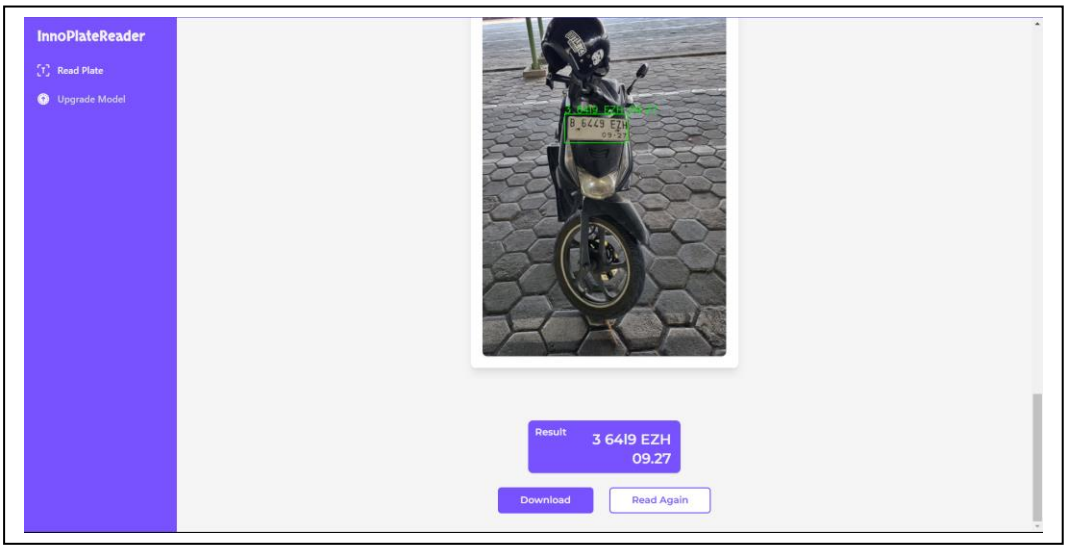


6. Setelah proses pengujian selesai, maka sistem akan menampilkan halaman hasil predict.

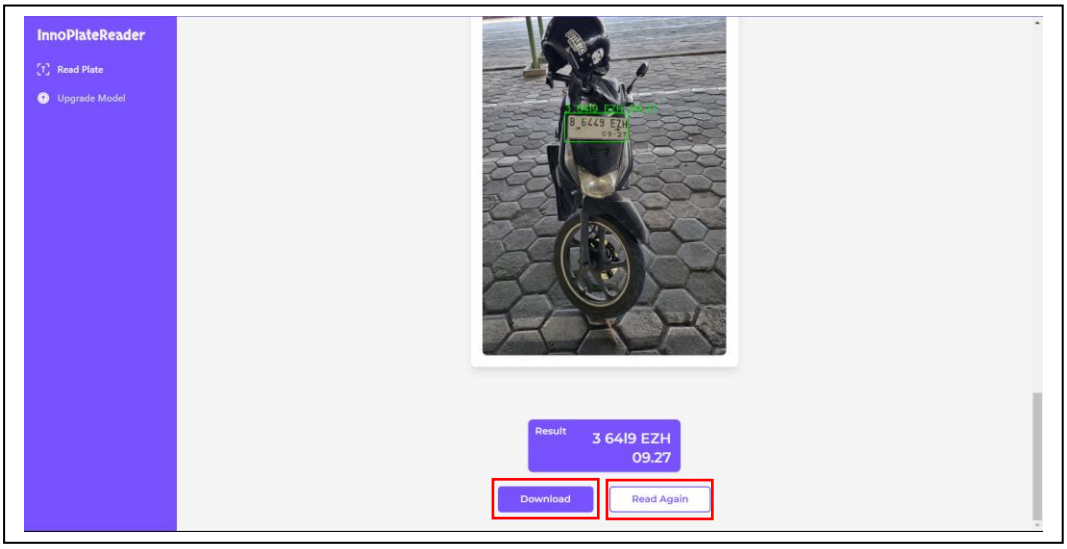



InnoPlateReader
Read Plate
Upgrade Model
Object Detection Image


InnoPlateReader
Read Plate
Upgrade Model
Crop Object
B 6449 EZH
09·27
Text Detection Image



7. Pengguna dapat mengembalikan halaman pengujian ini kembali bersih seperti pada langkah ke-1 dengan meng-klik tombol “Read Again”. Selain itu, pengguna dapat men-download hasil dari prediksi dengan meng-klik tombol “Download”.



Bagian 3

Source Code

Source code dari sistem yang telah dibuat dapat dilihat pada link berikut ini.

https://github.com/AcilRestu12/InnoPlateReader