

### Lampiran 3. Kode Program Sistem Deteksi Gerakan

#### **App.js**

```
import React, { useRef } from "react";
import "./App.css";
import * as tf from '@tensorflow/tfjs';
import * as posenet from "@tensorflow-models/posenet";
import Webcam from "react-webcam";
import { drawKeypoints, drawSkeleton } from "./utilities";

function App() {
  const webcamRef = useRef(null);
  const canvasRef = useRef(null);

  // Load posenet
  const runPosenet = async () =>
  {const net = await
  posenet.load({
    inputResolution: { width: 640, height: 480 },
    scale: 0.8,
  });
  //
  setInterval(()=>
  {detect(net);
  }, 100);
  };

  const detect = async (net) =>
  {if (
  typeof webcamRef.current !== "undefined" &&
  webcamRef.current !== null &&
  webcamRef.current.video.readyState === 4
  ) {
  // Get Video Properties
  const video = webcamRef.current.video;
  const videoWidth = webcamRef.current.video.videoWidth;
  const videoHeight = webcamRef.current.video.videoHeight;

  // Set video width
  webcamRef.current.video.width = videoWidth;
  webcamRef.current.video.height = videoHeight;

  // Make Detections
  const pose = await net.estimateSinglePose(video);
  console.log(pose);

  drawCanvas(pose, video, videoWidth, videoHeight, canvasRef);
  }
  };

  const drawCanvas = (pose, video, videoWidth, videoHeight, canvas) =>
  {const ctx = canvas.current.getContext("2d");
  canvas.current.width = videoWidth;
  canvas.current.height = videoHeight;
```

```

    drawSkeleton(pose["keypoints"], 0.7, ctx);
  };

  runPosenet();

  return (
    <div className="App">
      <header className="App-header">
        <Webcam
          ref={webcamRef}
          style={{
            position: "absolute",
            marginLeft: "auto",
            marginRight: "auto",
            left: 0,
            right: 0,
            textAlign: "center",
            zIndex: 9,
            width: 640,
            height: 480,
          }}
        />

        <canvas
          ref={canvasRef}
          style={{
            position: "absolute",
            marginLeft: "auto",
            marginRight: "auto",
            left: 0,
            right: 0,
            textAlign: "center",
            zIndex: 9,
            width: 640,
            height: 480,
          }}
        />
      </header>
    </div>
  );
}

export default App;

```

### **App.css**

```

.App {
  text-align: center;
}

.App-logo
{ height:
  40vmin;
  pointer-events: none;
}

@media (prefers-reduced-motion: no-preference) {

```

```
    animation: App-logo-spin infinite 20s linear;
  }
}
```

```
.App-header {
  background-color: #282c34;
  min-height: 100vh;
  display: flex;
  flex-direction: column;
  align-items: center;
  justify-content: center;
  font-size: calc(10px + 2vmin);
  color: white;
}
```

```
.App-link
{ color:
#61dafb;
}
```

```
@keyframes App-logo-spin
{ from {
  transform: rotate(0deg);
}
to {
  transform: rotate(360deg);
}
}
```

### **package.json**

```
{
  "name": "posenet",
  "version": "0.1.0",
  "private": true,
  "dependencies": {
    "@tensorflow-models/posenet": "^2.2.2",
    "@tensorflow/tfjs": "^4.20.0",
    "@tensorflow/tfjs-backend-webgl": "^3.21.0",
    "@tensorflow/tfjs-converter": "^3.21.0",
    "@tensorflow/tfjs-core": "^3.21.0",
    "@testing-library/jest-dom": "^4.2.4",
    "@testing-library/react": "^9.3.2",
    "@testing-library/user-event": "^7.1.2",
    "ml5": "^1.0.1",
    "mongoose": "^8.5.1",
    "p5": "^1.9.4",
    "react": "^16.13.1",
    "react-dom": "^16.13.1",
    "react-scripts": "3.4.3",
    "react-webcam": "^5.2.4"
  },
  "scripts": {
    "start": "react-scripts start",
    "build": "react-scripts build",
    "test": "react-scripts test",
  }
}
```

```

},
"eslintConfig":
  { "extends": "react-
    app"
  },
"browserslist":
  { "production":
    [ ">0.2%",
      "not dead",
      "not op_mini all"
    ],
    "development": [
      "last 1 chrome version",
      "last 1 firefox version",
      "last 1 safari version"
    ]
  },
"devDependencies":
  { "patch-package":
    "^8.0.0"
  }
}

```

### **Metadata.json**

```

{"tfjsVersion":"1.3.1","tmVersion":"0.8.6","packageVersion":"0.8.6","packageName":"@teachablemachine/pose","timeStamp":"2024-07-22T20:13:13.715Z","userMetadata":{},"modelName":"my-pose-model","labels":["KibasAtas","KibasBawah","KibasDalam","KibasLuar","SikutAtas","SikutBawah","SikutSamping"],"modelSettings":{"posenet":{"architecture":"MobileNetV1","outputStride":16,"inputResolution":257,"multiplier":0.75}}}

```

### **Model.json**

```

{"modelTopology":{"class_name":"Sequential","config":{"name":"sequential_2","layers":[{"class_name":"Dense","config":{"units":100,"activation":"relu","use_bias":true,"kernel_initializer":{"class_name":"VarianceScaling","config":{"scale":1,"mode":"fan_in","distribution":"normal","seed":null}},"bias_initializer":{"class_name":"Zeros","config":{}},"kernel_regularizer":null,"bias_regularizer":null,"activity_regularizer":null,"kernel_constraint":null,"bias_constraint":null,"name":"dense_Dense1","trainable":true,"batch_input_shape":[null,14739],"dtype":"float32"}},{class_name":"Dropout","config":{"rate":0.5,"noise_shape":null,"seed":null,"name":"dropout_Dropout1","trainable":true}},{class_name":"Dense","config":{"units":7,"activation":"softmax","use_bias":false,"kernel_initializer":{"class_name":"VarianceScaling","config":{"scale":1,"mode":"fan_in","distribution":"normal","seed":null}},"bias_initializer":{"class_name":"Zeros","config":{}},"kernel_regularizer":null,"bias_regularizer":null,"activity_regularizer":null,"kernel_constraint":null,"bias_constraint":null,"name":"dense_Dense2","trainable":true}}],"keras_version":"tfjs-layers1.3.1","backend":"tensor_flow.js"},"weightsManifest":{"paths":["weights.bin"],"weights":[{"name":"dense_Dense1/kernel","shape":[14739,100],"dtype":"float32"},{"name":"dense_Dense1/bias","shape":[100],"dtype":"float32"},{"name":"dense_Dense2/kernel","shape":[100,7],"dtype":"float32"}]}}

```

#### Lampiran 4. Kode Program Web Sistem Deteksi Gerakan

##### **App.js**

```
import React, { useState } from 'react';
import { Routes, Route } from 'react-router-dom';
import Login from './Pages/Login';
import About from './Pages/About';
import Sejarah from './Pages/Sejarah';
import Home from './Pages/Home';
import Teknik from './Pages/Teknik';
import './App.css';
import Dasar from './Pages/GerakanDasar/Dasar';

function App() {
  const [isLoggedIn, setIsLoggedIn] = useState(false);

  return (
    <div className="App">
      <header className="App-header">
        <Routes>
          <Route path="/login" element={}<Login setIsLoggedIn={setIsLoggedIn} /> />
          <Route path="/" element={isLoggedIn ? <Home /> : <Login
setIsLoggedIn={setIsLoggedIn} /> />
          <Route path="/about" element={}<About /> />
          <Route path="/sejarah" element={}<Sejarah /> />
          <Route path="/teknik" element={}<Teknik /> />
          <Route path="/dasar" element={}<Dasar /> />
        </Routes>
      </header>
    </div>
  );
}

export default App;
```

##### **App.css**

```
.App {
  text-align: center;
}

.App-logo
{ height:
  40vmin;
  pointer-events: none;
}

@media (prefers-reduced-motion: no-preference) {
  .App-logo {
    animation: App-logo-spin infinite 20s linear;
  }
}

.App-header {
  background-color: #ffffff;
```

```

display: flex;
flex-direction: column;
align-items: center;
justify-content: center;
font-size: calc(10px + 2vmin);
color: white;
}

```

```

.App-link
{ color:
#61dafb;
}

```

```

/* @keyframes App-logo-spin
{from {
transform: rotate(0deg);
}
to {
transform: rotate(360deg);
}
}*/

```

### **Login.js**

```

import React, { useRef, useState } from "react";
import './Login.css';
import logo from './Logoapk.png'; // pastikan path ini benar

const Login = ({ setIsLoggedIn }) => {
  const [username, setUsername] = useState("");
  const [password, setPassword] = useState("");
  const [error, setError] = useState("");

  const usernameRef = useRef(null);
  const passwordRef = useRef(null);

  const handleLogin = () => {
    // Contoh logika login sederhana (ganti dengan logika autentikasi Anda)
    if (username === "admin" && password === "password") {
      setIsLoggedIn(true);
    } else {
      setError("Invalid username or password");
      usernameRef.current.focus();
    }
  };

  return (
    <div className="login-container">
      <header className="login-header">
        <img src={logo} alt="Logo" className="login-logo" />
      </header>
      <main className="login-main">
        <h2>Login</h2>
        {error && <p style={{ color: "red" }}>{error}</p>}
        <form>
          <input

```

```

        placeholder="Username"
        ref={usernameRef}
        value={username}
        onChange={(e) => setUsername(e.target.value)}
      />
      <input
        type="password"
        placeholder="Password"
        ref={passwordRef}
        value={password}
        onChange={(e) => setPassword(e.target.value)}
      />
      <button type="button" onClick={handleLogin}>
        Login
      </button>
    </form>
  </main>
</div>
);
};

export default Login;

```

### **Login.css**

```

/* src/Login.css */
.login-container
{display: flex;
flex-direction: column;
align-items: center;
justify-content: center;
height: 100vh;
background-color: rgb(255, 255, 255);
width: 92%;
color: rgb(131, 131, 131);
}

.login-header
{display:
flex;
justify-content: center;
width: 100%;
padding: 50px;
background-color: black;
}

.login-logo {
width: 200px; /* Adjust this value to make the logo twice as large */
height: auto;
}

.login-main
{ display: flex;
flex-direction: column;
align-items: center;
justify-content: center;

```

```

form
  { display:
    flex;
    flex-direction: column;
    align-items: center;
  }

input[type="text"],
input[type="password"]
{margin: 10px 0;
  color: rgb(0, 0, 0);
  padding: 10px;
  width: 200px;
  border: none;
  border-radius: 5px;
  background-color: rgb(190, 190, 190);
}

button {
  margin-top: 20px;
  padding: 10px 20px;
  background-color: rgb(133, 133, 133);
  border: none;
  color: rgb(0, 0, 0);
  border-radius: 5px;
  cursor: pointer;
}

button:hover {
  background-color: darkred;
}

Home.js

import React from 'react';
import { Link } from "react-router-dom";
import './Home.css';
import logo from './Logoapk.png';
import logoSejarah from './LogoSejarah.png';
import logoGerakan from './LogoGerakan.png';
import logoPendeteksi from './LogoPendeteksi.png';

const Home = () =>
{return (
  <div className="home">
    <header className="home-header">
      <img src={logo} alt="Logo" className="home-logo" />
      <nav>
        <ul>
          <li><Link to="/about">About</Link></li>
          <li><Link to="/" className="signup-button">Log Out</Link></li>
        </ul>
      </nav>
    </header>
    <main>

```



```

<div className="home-options">
  <div className="option">
    <img src={logoSejarah} alt="Sejarah Tarung Derajat" />
    <p><Link to="/sejarah">Sejarah</Link></p>
  </div>
  <div className="option">
    <img src={logoGerakan} alt="Teknik Dasar Tarung Derajat" />
    <p><Link to="/teknik">Teknik</Link></p>
  </div>
  <div className="option">
    <img src={logoPendeteksi} alt="Pendeteksi Gerakan" />
    <p><Link to="/pendeteksi">Pendeteksi</Link></p>
  </div>
</div>
</main>
</div>
);
}

export default Home;

```

**Home.css**

```

/* src/Home.css */
.home {
  text-align: center;
  color: #000000;
  background-color: #ffffff;
}

.home-header
{display:
flex;
justify-content: space-between;
align-items: center;
padding:30px 50px;
background-color: #000000;
}

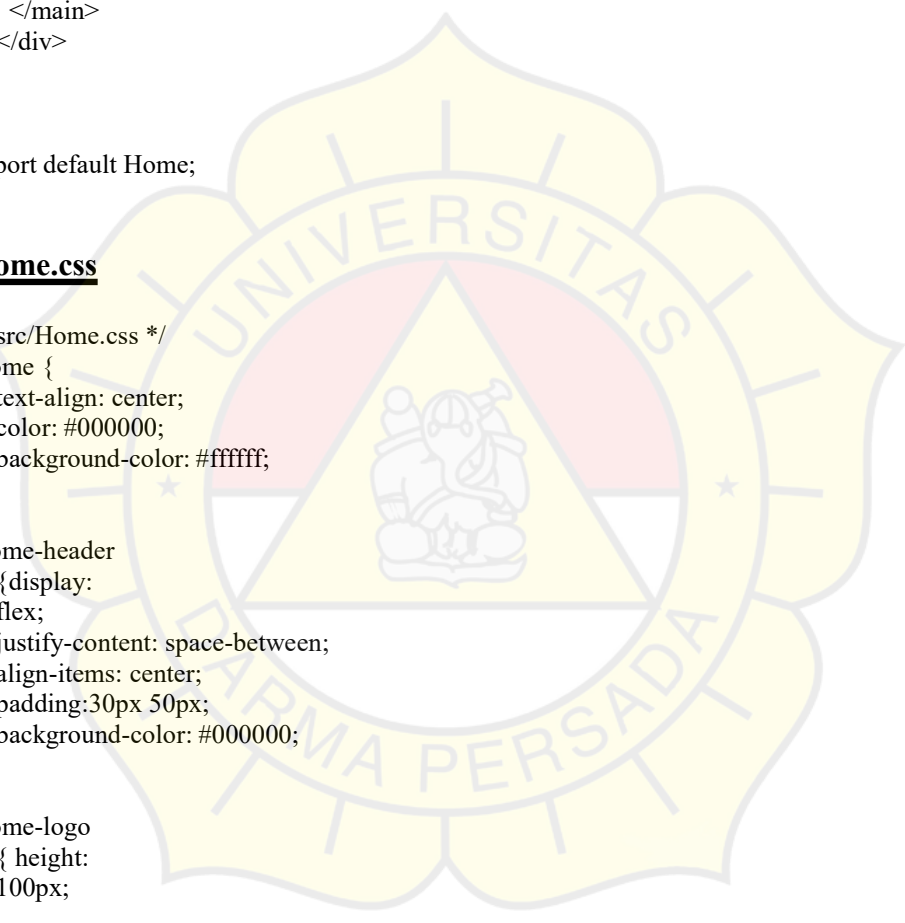
.home-logo
{ height:
100px;
}

nav ul {
  display: flex;
  list-style: none;
  padding: 0;
}

nav ul li {
  margin-left: 20px;
}

nav ul li a
{ color:

```



```

}

.signup-button {
  background-color: #ff0000;
  padding: 10px 20px;
  border-radius: 5px;
}

main {
  padding: 20px;
}

h1 {
  margin-top: 50px;
}

.home-options
{display:
flex;
justify-content: center;
flex-wrap: wrap;
margin-top: 50px;
}

.option
{ margin:
20px;
text-align: center;
}

.option img
{ height:
150px;
margin-bottom: 10px;
}

.option p a
{ color:
#000000;
text-decoration: none;
font-size: 20px;
}

```

## **About.js**

```

import React from 'react';
import { Link } from "react-router-dom";
import './About.css'; // Pastikan membuat file CSS ini
import logo from './Logoapk.png'; // Pastikan path ini benar

const About = () =>
{return (
  <div className="about-container">
    <div className="logo">
      <img src={logo} alt="Logo" className="home-logo" />
    </div>

```

```
<h1>Deskripsi Aplikasi Ini</h1>
<p>W-Motion Detection adalah aplikasi yang dibuat untuk mendeteksi gerakan beladiri yang dilakukan oleh peraga dan juga untuk membantu Anggota baru berlatih dirumah agar dapat memaksimalkan latihannya. Aplikasi ini dibangun menggunakan bahasa pemrograman Javascript, Library Tensorflow.js dan React, serta MongoDB sebagai Databasenya. </p>
</div>
</div>
)
```

export default About;

**About.css**

```
.about-container
{display: flex;
flex-direction: column;
justify-content: center;
align-items: center;
height: 100vh;
background-color: black;
position: relative;
color: white;
text-align: justify;
}

.logo {
position: absolute;
top: 7%;
left: 50%;
transform: translate(-50%, -50%);
}

.logo img {
width: 150px; /* Sesuaikan ukuran sesuai kebutuhan */
}

.menu {
position: absolute;
top: 30px;
right: 20px;
}

.menu .signup-btn
{ background-color: rgb(0, 0, 0);
color: rgb(2, 2, 2);
text-decoration: none;
padding: 10px 20px;
border-radius: 5px;
font-size: 18px;
}
```

```

background-color: white;
color: rgb(255, 255, 255);
padding: 20px;
border-radius: 0px;
text-align: justify;
max-width: 600px;
margin-top: 20px;
}

.description h1 {
font-size: 36px; /* Sesuaikan ukuran sesuai kebutuhan */
margin-bottom: 20px;
text-align: center;
padding: 25px 20px;
}

.description p {
font-size: 18px; /* Sesuaikan ukuran sesuai kebutuhan */
line-height: 1.6;
padding: 10px 20px;
}

```

### Sejarah.js

```

import React from 'react';
import { Link } from "react-router-dom";
import './Sejarah.css'; // Make sure to create this CSS file
import logo from './Logoapk.png'; // pastikan path ini benar

const Sejarah = () =>
{
return (
<div className="sejarah-container">
<div className="logo">
<img src={logo} alt="Logo" className="home-logo" />
</div>
<div className="menu">
<a <Link to="/">HOME</Link></a>
</div>
<div className="description">
<h1>Sejarah Tarung Derajat</h1>
<p>Tarung Derajat merupakan seni beladiri yang berasal dari negara Indonesia, di ciptakan oleh Ahmad Dradjat atau yang lebih dikenal dengan nama julukan Aa Boxer. Latar belakang berdirinya perguruan seni bela diri Tarung Derajat ini diawali dari kehidupan Achmad Derajat waktu masa remajanya sering menjadi bulan-bulanan tindak kekerasan pengeroyokan, pemerasan bahkan penghinaan yang dilakukan oleh orang yang lebih dewasa dari usianya. Demi kehormatan dan prinsip hidup yang Achmad Dradjat pegang, Achmad Dradjat muda terpaksa melakukan perlawanan dalam bentuk perkelahian demi perkelahian sehingga walau keadaan sering tidak seimbang sampai dia merasa bosan kalah dan terjadilah goncangan batin pada dirinya.</p>
</div>
</div>
)
}

export default Sejarah;

```

### Sejarah.css

```

.sejarah-container
{display: flex;
justify-content: center;
align-items: center;
height: 100vh;
background-color: black;
position: relative;
color: white;
text-align: justify;
}

.logo {
position: absolute;
top: 7%;
left: 50%;
transform: translate(-50%, -50%);
}

.logo img {
width: 150px; /* Sesuaikan ukuran sesuai kebutuhan */
}

.menu {
position: absolute;
top: 30px;
right: 20px;
}

.menu .signup-btn
{ background-color:
red;color: white;
text-decoration: none;
padding: 10px 20px;
border-radius: 5px;
font-size: 18px;
}

.description {
background-color: rgb(255, 255, 255);
color: black;
padding: 20px;
border-radius: 0px;
text-align: justify;
max-width: 600px;
margin-top: 150px;
}

.description h1 {
font-size: 36px; /* Sesuaikan ukuran sesuai kebutuhan */
margin-bottom: 2px;
text-align: center;
}

.description p {
font-size: 18px; /* Sesuaikan ukuran sesuai kebutuhan */
line-height: 1.6;
}

```

## Teknik.js

```
import React from 'react';
import { Link } from "react-router-dom";
import './Teknik.css'; // Pastikan membuat file CSS ini
import logo from './Logoapk.png'; // Pastikan path ini benar

const Teknik = () =>
{
  return (
    <div className="teknik-container">
      <header className="header">
        <img src={logo} alt="Logo" className="header-logo" />
        <div className="menu">
        </div>
      </header>
      <main className="main-content">
        <div className="option">
          <p><Link to="/dasar">Gerakan Dasar</Link></p>
        </div>
        <div className="option">
          <p><Link to="/shadow">Shadow Boxing</Link></p>
        </div>
      </main>
    </div>
  );
}

export default Teknik;
```

## Teknik.css

```
.teknik-container
{
  display: flex;
  flex-direction: column;
  justify-content: center;
  min-height: 100vh;
  background-color: #f0f0f0;
  color: #000000;
}

.header
{
  width: 90%;
  padding: 10px 500px;
  display: flex;
  justify-content: space-between;
  align-items: center;
  background-color: #000000;
}

.header-logo {
  width: 200px; /* Sesuaikan ukuran sesuai kebutuhan */
  justify-content: center;
}
```

```

.header-nav a
  { color: white;
    text-decoration: none;
    margin-left: 20px;
  }

.main-content
  { display: flex;
    flex-wrap: wrap;
    justify-content: center;
    margin-top: 100px;
  }

.option {
  background-color: white;
  border-radius: 10px;
  padding: 20px;
  margin-top: 50px;
}

.option img {
  width: 150px; /* Sesuaikan ukuran sesuai kebutuhan */
  height: auto;
  display: block;
  margin-bottom: 10px;
}

.option p
  { margin: 10px 0
    0;
  }

.option a
  { color:
    #ffffff;
    text-decoration: none;
    font-weight: bold;
  }

.option a:hover {
  text-decoration: underline;
}

```

### Dasar.js

```

import React from 'react';
import { Link } from "react-router-dom";
import './Dasar.css';
import logo from './Logoapk.png';
import KibasAtas from './KibasAtasSeragam.png';
import KibasBawah from './KibasBawahSeragam.png';
import KibasLuar from './KibasLuarSeragam.png';
import KibasDalam from './KibasDalamSeragam.png';
import SikutAtas from './SikutAtasSeragam.png';
import SikutSamping from './SikutSampingSeragam.png';

```

```

const Dasar = () =>
{return (
  <div className="home">
    <header className="home-header">
      <img src={logo} alt="Logo" className="home-logo" />
      <nav>
        <ul>
          <li><Link to="/" className="home-button">HOME</Link></li>
        </ul>
      </nav>
    </header>
    <main>
      <div className="home-options">
        <div className="option">
          <img src={KibasAtas} alt="Pukulan Kibas Atas" />
          <h1>Pukulan Kibas Atas</h1>
        </div>
        <div className="option">
          <img src={KibasBawah} alt="Pukulan Kibas Bawah" />
          <h1>Pukulan Kibas Bawah</h1>
        </div>
        <div className="option">
          <img src={KibasLuar} alt="Pukulan Kibas Luar" />
          <h1>Pukulan Kibas Luar</h1>
        </div>
        <div className="option">
          <img src={KibasDalam} alt="Pukulan Kibas Dalam" />
          <h1>Pukulan Kibas Dalam</h1>
        </div>
        <div className="option">
          <img src={SikutAtas} alt="Pukulan Sikut Atas" />
          <h1>Pukulan Sikut Atas</h1>
        </div>
        <div className="option">
          <img src={SikutSamping} alt="Pukulan Sikut Samping" />
          <h1>Pukulan Sikut Samping</h1>
        </div>
        <div className="option">
          <img src={SikutBawah} alt="Pukulan Sikut Bawah" />
          <h1>Pukulan Sikut Bawah</h1>
        </div>
      </div>
    </main>
  </div>
);
}

```

```
export default Dasar;
```

### **Dasar.css**

```

/* Dasar.css */
body {
  margin: 0;
  font-family: Arial, sans-serif;
  background-color: black;
}

```



```

    color: white;
  }

  .home {
    text-align: center;
  }

  .home-header
  {display: flex;
  justify-content: space-between;
  align-items: center;
  background-color: black;
  padding: 10px 20px;
  border-bottom: 1px solid #444;
  }

  .home-logo
  { height:
  100px;
  }

  nav ul {
    list-style-type: none;
    margin: 0;
    padding: 0;
    display: flex;
  }

  nav ul li {
    margin-left: 20px;
  }

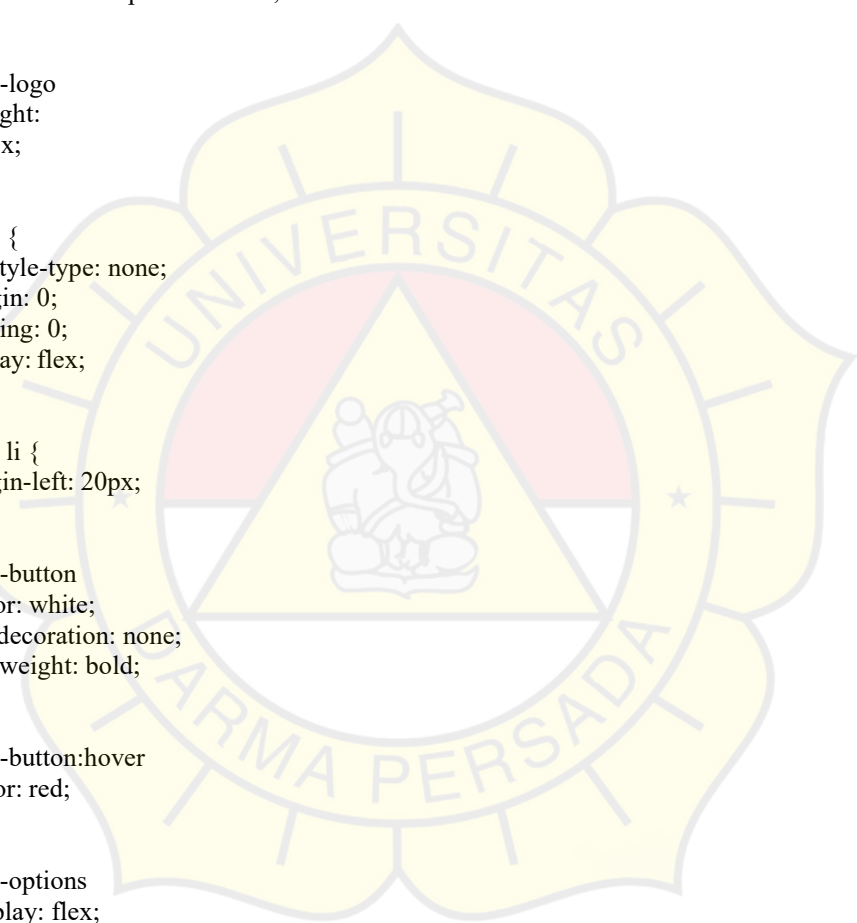
  .home-button
  {color: white;
  text-decoration: none;
  font-weight: bold;
  }

  .home-button:hover
  {color: red;
  }

  .home-options
  {display: flex;
  justify-content: center;
  flex-wrap: wrap;
  padding: 20px;
  text-align: justify;
  }

  .option
  { margin:
  10px; padding:
  10px;
  border: 1px solid #444;
  border-radius: 10px;
  transition: transform 0.2s;
  text-align: justify;

```



```

.option img
  { width: 150px;
    height: 200px;
    text-align: justify;
  }

.option: hover
  { transform:
    scale(1.1); text-align:
    justify;
  }

```

### **Package.json**

```

{
  "name": "deteksigerakan",
  "version": "0.1.0",
  "private": true,
  "dependencies": {
    "@tensorflow-models/posenet": "^2.2.2",
    "@tensorflow/tfjs": "^4.20.0",
    "@testing-library/jest-dom": "^5.17.0",
    "@testing-library/react": "^13.4.0",
    "@testing-library/user-event": "^13.5.0",
    "react": "^18.3.1",
    "react-dom": "^18.3.1",
    "react-router-dom": "^6.24.1",
    "react-scripts": "5.0.1",
    "react-webcam": "^5.2.4",
    "web-vitals": "^2.1.4"
  },
  "scripts": {
    "start": "react-scripts start",
    "build": "react-scripts build",
    "test": "react-scripts test",
    "eject": "react-scripts eject"
  },
  "eslintConfig":
  { "extends": [
    "react-app",
    "react-app/jest"
  ]
  },
  "browserslist":
  { "production":
    [ ">0.2%",
      "not dead",
      "not op_mini all"
    ],
    "development": [
      "last 1 chrome version",
      "last 1 firefox version",
      "last 1 safari version"
    ]
  }
}

```