# Project Development Phase Sprint-1 Source code

Date	1 November 2022
Team ID	PNT2022TMID51944
Project Name	VirtualEye - Life Guard For Swimming Pools To Detect Active Drowning
Maximum Marks	8 Marks

#### Index.html

```
<!DOCTYPE html>
<html lang="en">
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <!--Bootstrap -->
    <link rel="stylesheet"</pre>
href="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/css/bootstrap.min.css"
integrity="sha384-
Gn5384xqQ1aoWXA+058RXPxPg6fy4IWvTNh0E263XmFcJlSAwiGgFAW/dAiS6JXm"
crossorigin="anonymous">
    <script src="https://code.jquery.com/jquery-3.2.1.slim.min.js"</pre>
integrity="sha384-
KJ3o2DKtIkvYIK3UENzmM7KCkRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN"
crossorigin="anonymous"></script>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"
integrity="sha384-
ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q"
crossorigin="anonymous"></script>
    <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"
integrity="sha384-
JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmYl"
crossorigin="anonymous"></script>
    <script src="https://kit.fontawesome.com/8b9cdc2059.js"</pre>
crossorigin="anonymous"></script>
```

```
link
href="https://fonts.googleapis.com/css2?family=Akronim&family=Roboto&display=swap"
rel="stylesheet">
   <link rel="stylesheet" href="style.css">
   <!-- <script defer src="main.js"></script> -->
   <title>Virtual Eye</title>
</head>
<body>
   <header id="head" class="header">
  <section id="navbar">
         <h1 class="nav-heading"></i>Virtual Eye</h1>
     <div class="nav--items">
             <a href="{{url_for('index')}}">Home</a>
             <a href="{{url for('login')}}">Login</a>
             <a href="{{url_for('register')}}">Register</a>
            <a href="{{url for('prediction')}}">Demo</a>
         </div>
  </section>
  <section id="slider">
   <div id="carouselExampleIndicators" class="carousel" data-ride="carousel">
       class="active ">
          <div class="carousel-inner">
          <div class="carousel-item active">
             <img class="d-block w-100" src="../static/img/1.jpg" alt="First</pre>
slide">
          </div>
          <div class="carousel-item">
             <img class="d-block w-100" src="../static/img/2.jpg" alt="Second</pre>
slide">
          </div>
          <div class="carousel-item">
             <img class="d-block w-100" src="../static/img/3.jpg" alt="Third</pre>
slide">
          </div>
      </div>
      <a class="carousel-control-prev" href="#carouselExampleIndicators"</pre>
role="button" data-slide="prev">
          <span class="carousel-control-prev-icon" aria-hidden="true"></span>
          <span class="sr-only">Previous</span>
```

```
<a class="carousel-control-next" href="#carouselExampleIndicators"</pre>
role="button" data-slide="next">
            <span class="carousel-control-next-icon" aria-hidden="true"></span>
            <span class="sr-only">Next</span>
    </div>
   </section>
</header>
<section id="about">
    <div class="top">
        <h3 class="title text-muted">
            ABOUT PROJECT
        </h3>
        <div class="line"></div>
    </div>
<div class="body">
<div class="left">
    <h2>Problem:</h2>
```

Swimming is one of the best exercises that helps people to reduce stress in this urban lifestyle. Swimming pools are found larger in number in the hotels, weekend tourist spots and barely people have in their house backyard. Beginners, especially often feel it difficult to breathe under water and causes breathing trouble which in turn cause a drowning accident. Worldwide, drowning produces a higher rate of mortality without causing injury to children. Children under six of their age are found to be suffering the highest drowning mortality rates worldwide. Such kinds of deaths account for the third cause of unplanned death globally, with about 1.2 million cases yearly.

To overcome the conflict, a meticulous system is to be implemented along the swimming pools to save the human life. By studying body movement patterns and connecting cameras to an artificial intelligence (AI)system we can devise an underwater pool safety system that reduces the risk of drowning. Usually such systems can be developed by installing more than 16 cameras underwater and ceiling and analysing the video feeds to detect any anomalies . but AS a POC we make use of one camera that streams the video underwater and analyses the position of swimmers to assess the probability of drowning ,if it is higher than an alert will be generated to attract lifeguards attention.

```
</div>
</div>
<div class="bottom">
```

```
Note: The system is not designed to replace a lifeguard or other
human monitor, but to act as an additional tool. "It helps the lifeguard to detect
the underwater situation where they can't easily observe.
        </b>
    </div>
</section>
<section id="footer">
    Copyright © 2021. All Rights Reserved
    <div class="social">
     <a href="#" target="_blank"><i class="fab fa-2x fa-twitter-square"></i></a>
      <a href="#" target=" blank">
       <i class="fab fa-2x fa-linkedin"></i></a>
       <a href="#">
           <i class="#"></i>
       </a>
    </div>
</section>
</body>
</html>
```

### Register.html

```
<!DOCTYPE html>
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1">
 <title>Virtual Eye</title>
  <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet'</pre>
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet'</pre>
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet'</pre>
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300'</pre>
rel='stylesheet' type='text/css'>
<link rel="stylesheet" href="style.css">
<link href='https://fonts.googleapis.com/css?family=Merriweather'</pre>
rel='stylesheet'>
<link href='https://fonts.googleapis.com/css?family=Josefin Sans'</pre>
rel='stylesheet'>
<link href='https://fonts.googleapis.com/css?family=Montserrat' rel='stylesheet'>
```

```
<style>
.header {
      top:0;
      margin:0px;
      left: 0px;
      right: 0px;
      position: fixed;
      background-color: rgb(176, 9, 148);
      color: rgb(110, 5, 113);
      box-shadow: 0px 8px 4px rgb(151, 3, 124);
      overflow: hidden;
      padding-left:20px;
      font-family: 'Josefin Sans';
      font-size: 2vw;
      width: 100%;
      height:8%;
      text-align: center;
    .topnav {
  overflow: hidden;
  background-color: rgb(151, 3, 124);
.topnav-right a {
 float: left;
 color: #ffffff;
 text-align: center;
 padding: 14px 16px;
  text-decoration: none;
  font-size: 18px;
.topnav-right a:hover {
  background-color: rgb(127, 5, 149);
  color: rgb(255, 255, 255);
.topnav-right a.active {
  background-color: #880988;
  color: white;
.topnav-right {
 float: right;
 padding-right:100px;
.login{
margin-top:-70px;
```

```
body {
  background-color:#ffffff;
  background-repeat: no-repeat;
  background-size:cover;
  background-position: 0px 0px;
.login{
  margin-top:100px;
form {border: 3px solid #f1f1f1; margin-left:400px;margin-right:400px;}
input[type=text], input[type=email],input[type=number],input[type=password] {
 width: 100%;
 padding: 12px 20px;
 display: inline-block;
  margin-bottom:18px;
 border: 1px solid #ccc;
  box-sizing: border-box;
button {
  background-color: rgb(127, 5, 149);
  color: white;
  padding: 14px 20px;
  margin-bottom:8px;
  border: none;
  cursor: pointer;
  width: 100%;
button:hover {
  opacity: 0.8;
.cancelbtn {
 width: auto;
 padding: 10px 18px;
  background-color: #f44336;
.imgcontainer {
 text-align: center;
  margin: 24px 0 12px 0;
img.avatar {
 width: 30%;
```

```
border-radius: 50%;
.container {
  padding: 16px;
span.psw {
 float: right;
 padding-top: 16px;
/* Change styles for span and cancel button on extra small screens */
@media screen and (max-width: 300px) {
  span.psw {
    display: block;
     float: none;
  .cancelbtn {
    width: 100%;
</style>
<body style="font-family:Montserrat;">
<div class="header">
<div style="width:50%;float:left;font-size:2vw;text-align:left;color:white;</pre>
padding-top:1%">Virtual Eye</div>
 <div class="topnav-right" >
    <a href="{{url_for('index')}}">Home</a>
    <a href="{{url_for('login')}}">Login</a>
    <a class="active" href="{{url_for('register')}}">Register</a>
</div>
<div id="login" class="login">
  <form action="{{url_for('afterreg')}}" method="post">
    <div class="imgcontainer">
      <img src="https://cdn.digitalhealth.net/wp-</pre>
content/uploads/2017/03/eye_image_generic_555.jpg" alt="Avatar" class="avatar">
    </div>
```

# Logout.html

```
<!DOCTYPE html>
<head>
  <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1">
 <title>Virtual Eye</title>
 <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet'</pre>
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet'</pre>
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet'</pre>
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300'</pre>
rel='stylesheet' type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Merriweather'</pre>
rel='stylesheet'>
<link href='https://fonts.googleapis.com/css?family=Josefin Sans'</pre>
rel='stylesheet'>
<link href='https://fonts.googleapis.com/css?family=Montserrat' rel='stylesheet'>
<style>
.header {
      top:0;
```

```
margin:0px;
      left: 0px;
      right: 0px;
      position: fixed;
      background-color: rgb(176, 9, 148);
      color: white;
      box-shadow: 0px 8px 4px rgb(151, 3, 124)y;
      overflow: hidden;
      padding-left:20px;
      font-family: 'Josefin Sans';
      font-size: 2vw;
      width: 100%;
      height:8%;
      text-align: center;
    .topnav {
  overflow: hidden;
  background-color: #333;
.topnav-right a {
 float: left;
 color: #f2f2f2;
 text-align: center;
 padding: 14px 16px;
 text-decoration: none;
  font-size: 18px;
.topnav-right a:hover {
  background-color: #ddd;
  color: black;
.topnav-right a.active {
  background-color: #565961;
  color: white;
.topnav-right {
 float: right;
 padding-right:100px;
.login{
margin-top:-70px;
body {
```

```
background-color:#ffffff;
  background-repeat: no-repeat;
  background-size:cover;
  background-position: 0px 0px;
.main{
  margin-top:100px;
  text-align:center;
form { margin-left:400px;margin-right:400px;}
input[type=text], input[type=email],input[type=number],input[type=password] {
  width: 100%;
  padding: 12px 20px;
  display: inline-block;
  margin-bottom:18px;
 border: 1px solid #ccc;
  box-sizing: border-box;
button {
  background-color: #28272c;
  color: white;
  padding: 14px 20px;
 margin-bottom:8px;
  border: none;
  cursor: pointer;
  width: 20%;
button:hover {
  opacity: 0.8;
.cancelbtn {
 width: auto;
  padding: 10px 18px;
  background-color: #f44336;
.imgcontainer {
 text-align: center;
  margin: 24px 0 12px 0;
img.avatar {
  width: 30%;
  border-radius: 50%;
```

```
.container {
  padding: 16px;
span.psw {
 float: right;
  padding-top: 16px;
/* Change styles for span and cancel button on extra small screens */
@media screen and (max-width: 300px) {
  span.psw {
     display: block;
     float: none;
  .cancelbtn {
    width: 100%;
</style>
</head>
<body style="font-family:Montserrat;">
<div class="header">
<div style="width:50%;float:left;font-size:2vw;text-align:left;color:white;</pre>
padding-top:1%">Virtual eye</div>
 <div class="topnav-right" style="padding-top:0.5%;">
    <a href="index.html">Home</a>
    <a href="login.html">Login</a>
    <a href="register.html">Register</a>
  </div>
</div>
<div class="main">
<h1>Successfully Logged Out!</h1>
<h3 style="color:#4CAF50">Login for more information<h3>
  <a href="login.html"><button type="submit">Login</button></a>
</form>
</div>
</body>
</html>
```

### Login.html

```
<!DOCTYPE html>
<head>
  <meta charset="UTF-8">
 <meta name="viewport" content="width=device-width, initial-scale=1">
 <title>Virtual Eye</title>
  <link href='https://fonts.googleapis.com/css?family=Pacifico' rel='stylesheet'</pre>
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Arimo' rel='stylesheet'</pre>
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Hind:300' rel='stylesheet'</pre>
type='text/css'>
<link href='https://fonts.googleapis.com/css?family=Open+Sans+Condensed:300'</pre>
rel='stylesheet' type='text/css'>
<link rel="stylesheet" href="{{ url_for('static', filename='css/style.css') }}">
<link href='https://fonts.googleapis.com/css?family=Merriweather'</pre>
rel='stylesheet'>
<link href='https://fonts.googleapis.com/css?family=Josefin Sans'</pre>
rel='stylesheet'>
<link href='https://fonts.googleapis.com/css?family=Montserrat' rel='stylesheet'>
<style>
.header {
     top:0;
      margin:0px;
      left: 0px;
      right: 0px;
      position: fixed;
      background-color: rgb(176, 9, 148);
      color: white;
      box-shadow: 0px 8px 4px rgb(151, 3, 124);
      overflow: hidden;
      padding-left:20px;
      font-family: 'Josefin Sans';
      font-size: 2vw;
      width: 100%;
      height:8%;
      text-align: center;
.topnav {
  overflow: hidden;
  background-color: rgb(146, 5, 127);
.topnav-right a {
```

```
float: left;
  color: #f2f2f2;
 text-align: center;
 padding: 14px 16px;
 text-decoration: none;
 font-size: 18px;
.topnav-right a:hover {
 background-color: #ddd;
 color: rgb(113, 8, 115);
.topnav-right a.active {
 background-color: #6f0966;
 color: white;
.topnav-right {
 float: right;
 padding-right:100px;
.login{
margin-top:-70px;
body {
 background-color:#ffffff;
 background-repeat: no-repeat;
 background-size:cover;
 background-position: 0px 0px;
.login{
 margin-top:100px;
form {border: 3px solid #f1f1f1; margin-left:400px;margin-right:400px;}
input[type=text], input[type=email],input[type=number],input[type=password] {
 width: 100%;
 padding: 12px 20px;
 display: inline-block;
 margin-bottom:18px;
 border: 1px solid #ccc;
 box-sizing: border-box;
button {
 background-color: rgb(146, 5, 127);
```

```
color: white;
  padding: 14px 20px;
  margin-bottom:8px;
  border: none;
  cursor: pointer;
 width: 100%;
 font-weight:bold;
button:hover {
  opacity: 0.8;
.cancelbtn {
 width: auto;
 padding: 10px 18px;
 background-color: #f44336;
.imgcontainer {
 text-align: center;
 margin: 24px 0 12px 0;
img.avatar {
 width: 30%;
  border-radius: 50%;
.container {
 padding: 16px;
span.psw {
 float: right;
 padding-top: 16px;
/* Change styles for span and cancel button on extra small screens */
@media screen and (max-width: 300px) {
  span.psw {
     display: block;
     float: none;
  .cancelbtn {
     width: 100%;
```

```
</style>
</head>
<body style="font-family:Montserrat;">
<div class="header">
<div style="width:50%;float:left;font-size:2vw;text-align:left;color:white;</pre>
padding-top:1%">Virtual Eye</div>
  <div class="topnav-right" style="padding-top:0.5%;">
    <a href="index.html">Home</a>
    <a class="active" href="login.html">Login</a>
    <a href="register.html">Register</a>
  </div>
</div>
<div id="login" class="login">
  <form action="{{url_for('afterlogin')}}" method="post">
    <div class="imgcontainer">
      <img src="https://cdn.digitalhealth.net/wp-</pre>
content/uploads/2017/03/eye_image_generic_555.jpg" alt="Avatar" class="avatar">
    </div>
    <div class="container">
      <input type="email" placeholder="Enter registered email ID" name="_id"</pre>
required><br>
      <input type="password" placeholder="Enter Password" name="psw" required>
      <button type="submit">Login</button><br>
    </div>
  </form>
</div>
</body>
</html>
```

## Style.css

```
:root{
    --main-bg-color: #fff;
    --text-color:#ced4da;
    --bs-font-sans-serif: Poppins, system-ui, -apple-system, "Segoe UI", Roboto,
"Helvetica Neue", Arial, "Noto Sans", sans-serif, "Apple Color Emoji", "Segoe UI
Emoji", "Segoe UI Symbol", "Noto Color Emoji";
    --navbar-bg:rgb(176, 9, 148);
    --hover-color:#7a0a83;
   --yellow:#FFD700;
    --box-shadow:rgba(100, 100, 111, 0.2) 0px 7px 29px 0px
   margin: 0;
    padding: 0;
    box-sizing: border-box;
body{
    background: var(--main-bg-color);
    font-family: var(--bs-font-sans-serif);
    color: #333;
    line-height: 1.6;
ul{
    list-style:none;
a{
   text-decoration: none;
    color: var(--text-color);
h1,h2{
    font-weight: 360;
    line-height: 1.2;
margin: 10px 0px;
.m2{
    margin-right: 10px;
 * utility */
```

```
.title{
    margin-top: 10px;
    text-align: center;
html {
    scroll-behavior: smooth;
#head #navbar{
    height: 100px;
    width: auto;
    background-color: var(--navbar-bg);
    color: #fff;
    padding: 10px;
#navbar{
    display: flex;
    justify-content: space-between;
    align-items: center;
#navbar .nav--items ul{
    display: flex;
    align-items: center;
#navbar .nav--items ul li a{
margin: 10px;
text-decoration: none;
#navbar .nav--items ul li a:hover{
    color:var(--hover-color);
/* header carousel */
#head #slider .carousel-item img{
    display: block;
    width:100%;
    height: 50vh;
.font{
    font-size: 50px;
    font-weight: bold;
    color: #fff;
#about .top{
```

```
margin-top: 20px;
 .line{
    background-color: var(--yellow);
    width: 200px;
    height: 2px;
   margin: auto;
    margin-top: 10px;
#about .body{
   margin-top: 20px;
    display: grid;
    grid-template-columns: 1fr 1fr;
    text-align: center;
#about .body .right,#about .body .left
    box-shadow: rgb(151, 3, 124) 0px 3px 3px 0px;
margin: 0.5rem;
#about .body .right p{
    justify-self: center;
    margin-top: 50px;
#services .testimonials{
    display: grid;
    grid-template-columns: 1fr 1fr 1fr;
    grid-column-gap: 10px;
   grid-row-gap: 20px;
   margin: 40px;
   justify-items: center;
#services .testimonials .card{
box-shadow: rgba(0, 0, 0, 0.35) 0px 5px 15px;
text-align: center;
#services .testimonials .card h5{
text-transform: uppercase;
#contact .contact-container{
   display: grid;
```

```
grid-template-columns: repeat(2,1fr);
    justify-items: center;
    margin: 3rem;
#contact .contact-container .conatct-left .items h3{
    display: inline;
    margin-left: 10px;
#contact .contact-container .conatct-left .items{
   margin: 10px;
   margin-bottom: 30px;
#contact .contact-container .contact-right form input,
#contact .contact-container .contact-right form button
    display: block;
   margin: 20px
 #footer {
    width: auto;
     height: 80px;
        background-color: var(--navbar-bg);
        color: #fff;
        display: flex;
        align-items: center;
        justify-content: space-around;
 #footer .social a{
   margin-left: 20px;
    text-decoration: none;
#footer .social a:hover{
     color: var(--hover-color);
/* prediction.html */
#prediction .prediction-input{
    display: flex;
    align-items: center;
   justify-content: center;
   margin-top: 1.5rem;
#prediction .prediction-input form{
   margin-left: 1.2rem;
```

```
#prediction .circle {
    width: 150px;
    height: 150px;
   border-radius: 50%;
    margin-bottom: 5px;
    box-shadow:var(--box-shadow);
    transition:all ease-in 1s;
.output{
   width: 200px;
   margin: 10rem 1.5rem;
    padding: 6px;
    text-align: center;
    box-shadow: rgba(0, 0, 0, 0.35) 0px 5px 15px;
.output-container{
    display: grid;
    row-gap: 10px;
    grid-template-areas: 'img1 img2 img3 img4 img5 img6';
/* Hidden class */
.hidden{
    visibility: hidden;
.hide{
    visibility: hidden;
```

#### Prediction.html

```
KJ3o2DKtIkvYIK3UENzmM7KCkRr/rE9/Qpg6aAZGJwFDMVNA/GpGFF93hXpG5KkN"
crossorigin="anonymous"></script>
    <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.12.9/umd/popper.min.js"
integrity="sha384-
ApNbgh9B+Y1QKtv3Rn7W3mgPxhU9K/ScQsAP7hUibX39j7fakFPskvXusvfa0b4Q"
crossorigin="anonymous"></script>
   <script
src="https://maxcdn.bootstrapcdn.com/bootstrap/4.0.0/js/bootstrap.min.js"
integrity="sha384-
JZR6Spejh4U02d8jOt6vLEHfe/JQGiRRSQQxSfFWpi1MquVdAyjUar5+76PVCmY1"
crossorigin="anonymous"></script>
    <script src="https://kit.fontawesome.com/8b9cdc2059.js"</pre>
crossorigin="anonymous"></script>
   link
href="https://fonts.googleapis.com/css2?family=Akronim&family=Roboto&display=swap"
rel="stylesheet">
   <link rel="stylesheet" href="style.css">
   <script defer src="JScript.js"></script>
   <title>Prediction</title>
</head>
<body>
    <header id="head" class="header">
       <section id="navbar">
               <h1 class="nav-heading"></i>Virtual Eye</h1>
           <div class="nav--items">
               <u1>
                   <a href="index.html">Home</a>
               <a href="logout.html">Logout</a>
               <!-- <li><a href="#about">About</a>
              <a href="#services">Services</a> -->
               </div>
       </section>
   </header>
   <!-- dataset/Training/metal/metal326.jpg -->
   </br>
   <section id="prediction">
    <h2 class="title text-muted">Virtual Eye- Life Guard for Swimming Pools to
Detect Active Drowning</h1>
    <div class="line" style="width: 900px;"></div>
         </section>
         </br>
   <section id="about">
```

```
<div class="body">
<div class="left">
       Swimming is one of the best exercises that helps people to reduce stress in
this urban lifestyle. Swimming pools are found larger in number in the hotels,
weekend tourist spots and barely people have in their house backyard. Beginners,
especially often feel it difficult to breathe under water and causes breathing
trouble which in turn cause a drowning accident. Worldwide, drowning produces a
higher rate of mortality without causing injury to children. Children under six of
their age are found to be suffering the highest drowning mortality rates
worldwide..Such kinds of deaths account for the third cause of unplanned
death globally, with about 1.2 million cases yearly.
       </div>
<div class="left">
    <div class="prediction-input">
        <img class="d-block w-100" src="../static/img/2.jpg" alt="Second slide">
        </br>
                <form id="form" action="/result"</pre>
method="post" enctype="multipart/form-data">
```

Demo">

</div> </div> </section> </form>

<h5 style="text-color:Red">

<b style="text-color:Red">prediction<b>

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</div>

</h5>

</br></br>

</section>

</body>

</html>

<section id="footer">

<input type="submit" class="submitbtn" value="Click Me! For a</pre>