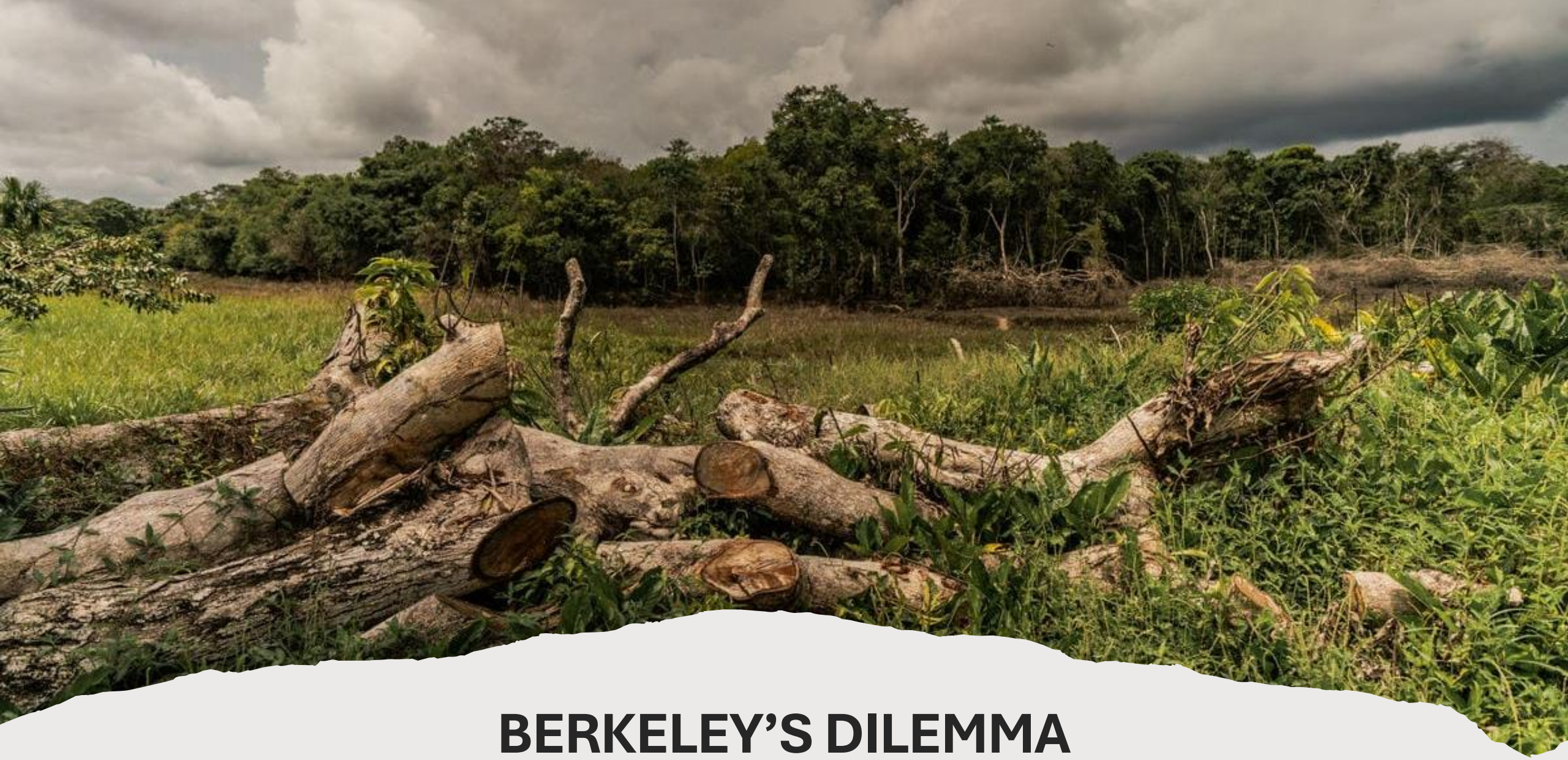
If a tree falls,
would you hear it
die?

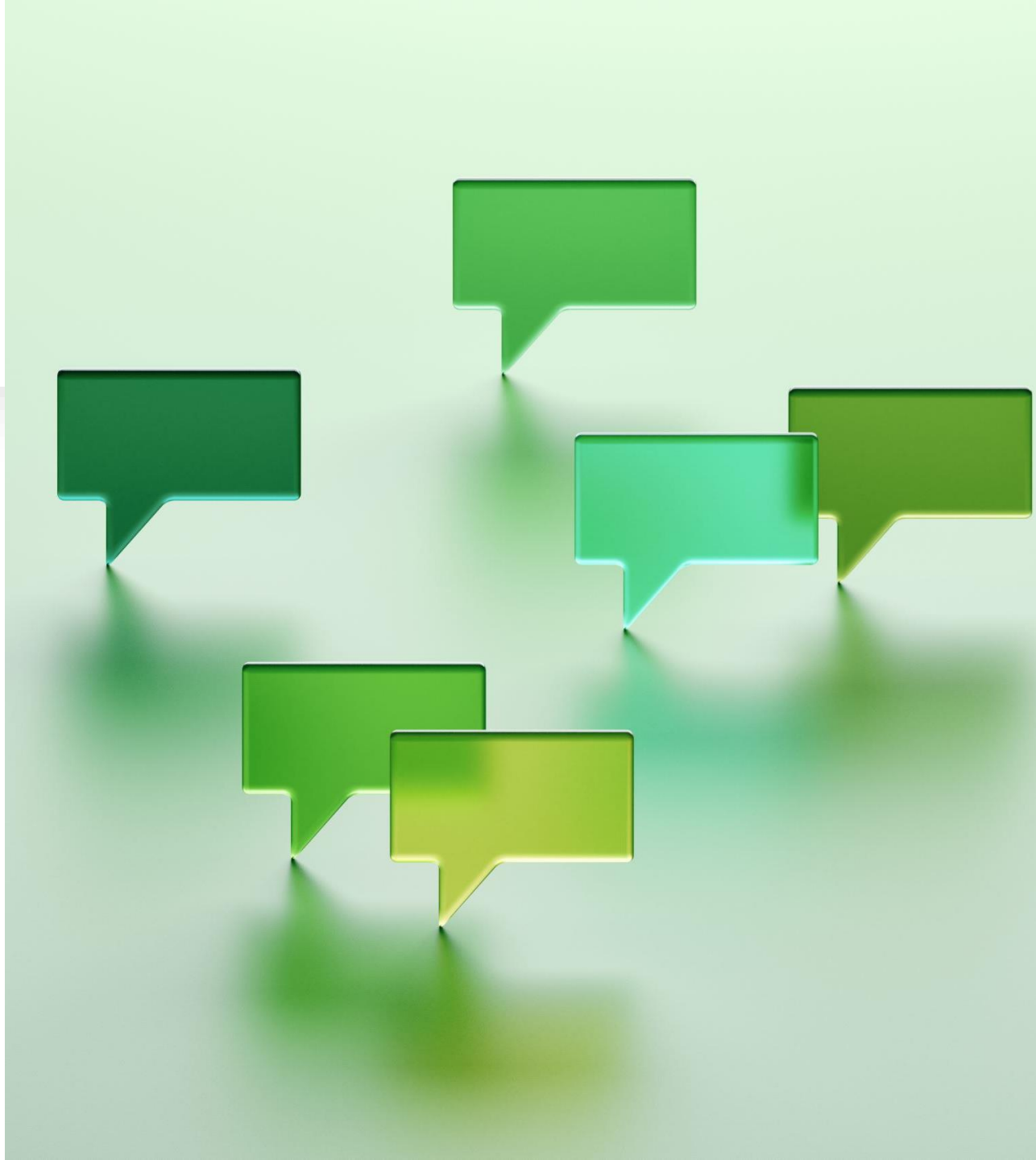


BERKELEY'S DILEMMA

By: Rodrigo Lopez, David Avalos, Erasmo Medina

Problem Statement

- The growing need for intuitive, responsive web applications that present environmental data in an interactive and engaging manner. Users face challenges in accessing and interpreting dynamic data from various environments.



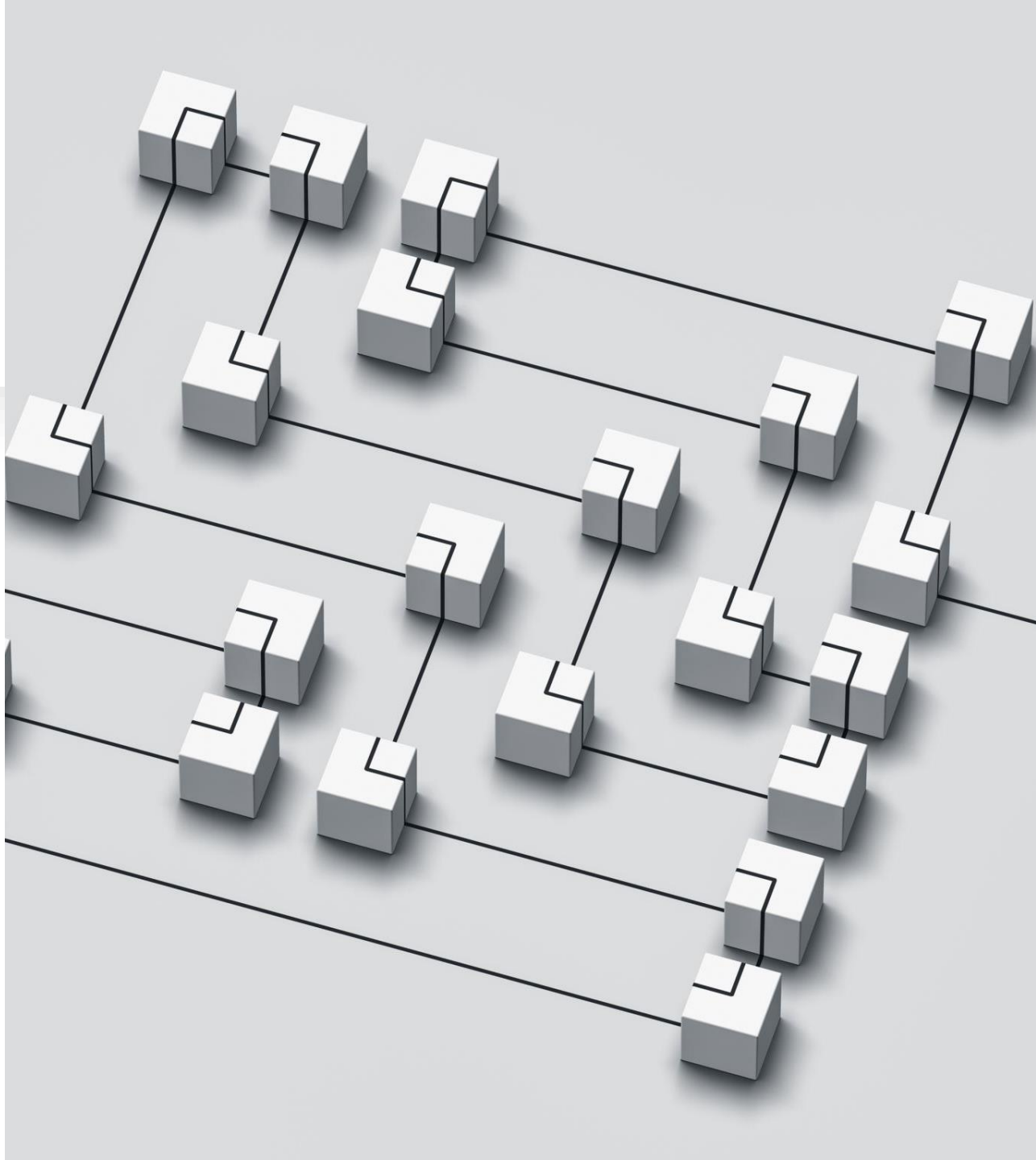
Proposed Solution

- Berkeley's Dilemma" is a web application designed to address these challenges by: Offering a multi-environment interface that allows users to explore different environmental settings. Interactive design elements such as a custom carousel, timeline, and dynamic UI components. Secure user authentication and email notifications for user engagement. Location-based environmental data visualization using ArcGIS API for an immersive experience.

Evolution of the Solution

Initial Setup:

- Created the project structure with basic frontend (HTML, CSS, Bootstrap)

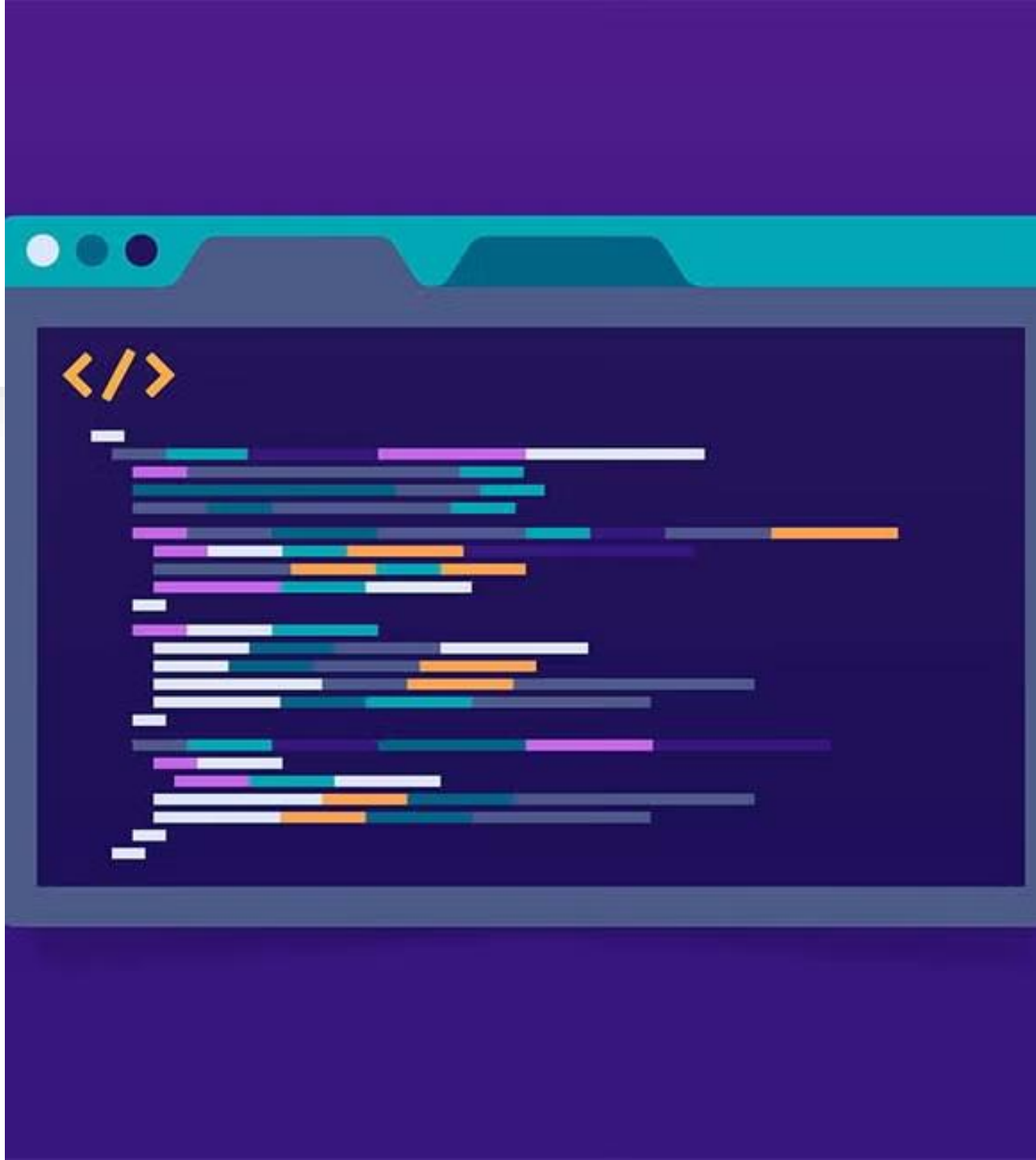


Feature Development:

- Introduced interactive elements (custom carousel, timeline, sliding bar). Integrated ArcGIS API for environmental data visualization. Implemented secure authentication using bcrypt and Nodemailer for email notifications.
- Backend (Node.js, Express, MongoDB). Focused on responsive UI and foundational features.

Refinement:

- Improved design with modular CSS for easier customization and better maintainability.
- Enhanced the user login system, implemented password hashing, and improved UI logic.
- Pased all our page to react, to optimize our page.



Challenges Faced and Solutions

Challenge 1: Ensuring a smooth, interactive UI experience across different environments.

Challenge 2: Implementing secure user authentication and email notifications.

Challenge 3: Visualizing dynamic environmental data.

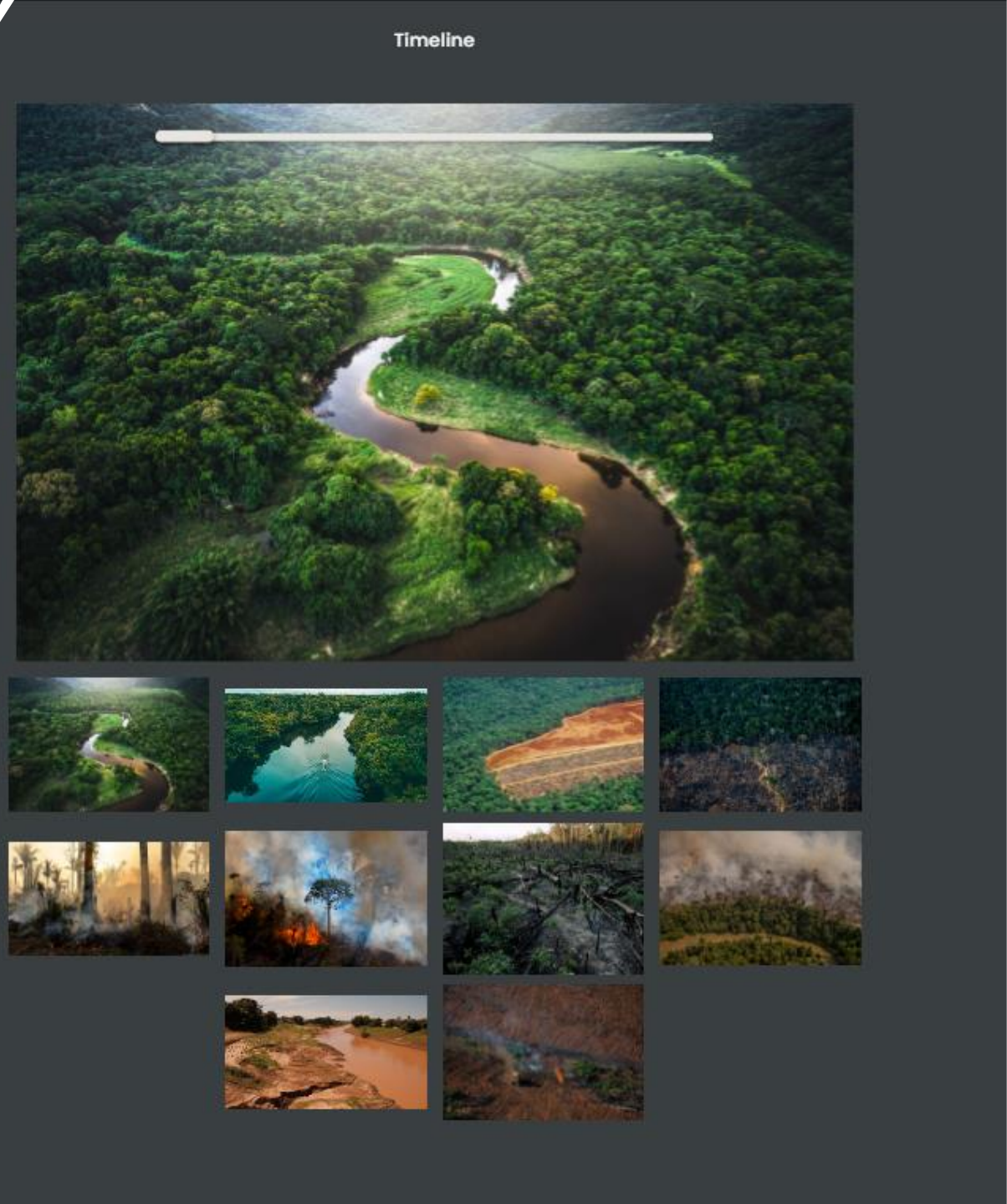
Solution: We used **modular CSS** and **Bootstrap** to ensure responsiveness and smooth navigation.

Solution: Integrated **bcrypt** for password hashing and **Nodemailer** with **Google OAuth2** for secure email functionality.

Solution: Utilized **ArcGIS API** for dynamic, location-based environmental data mapping and visualization.

Final product

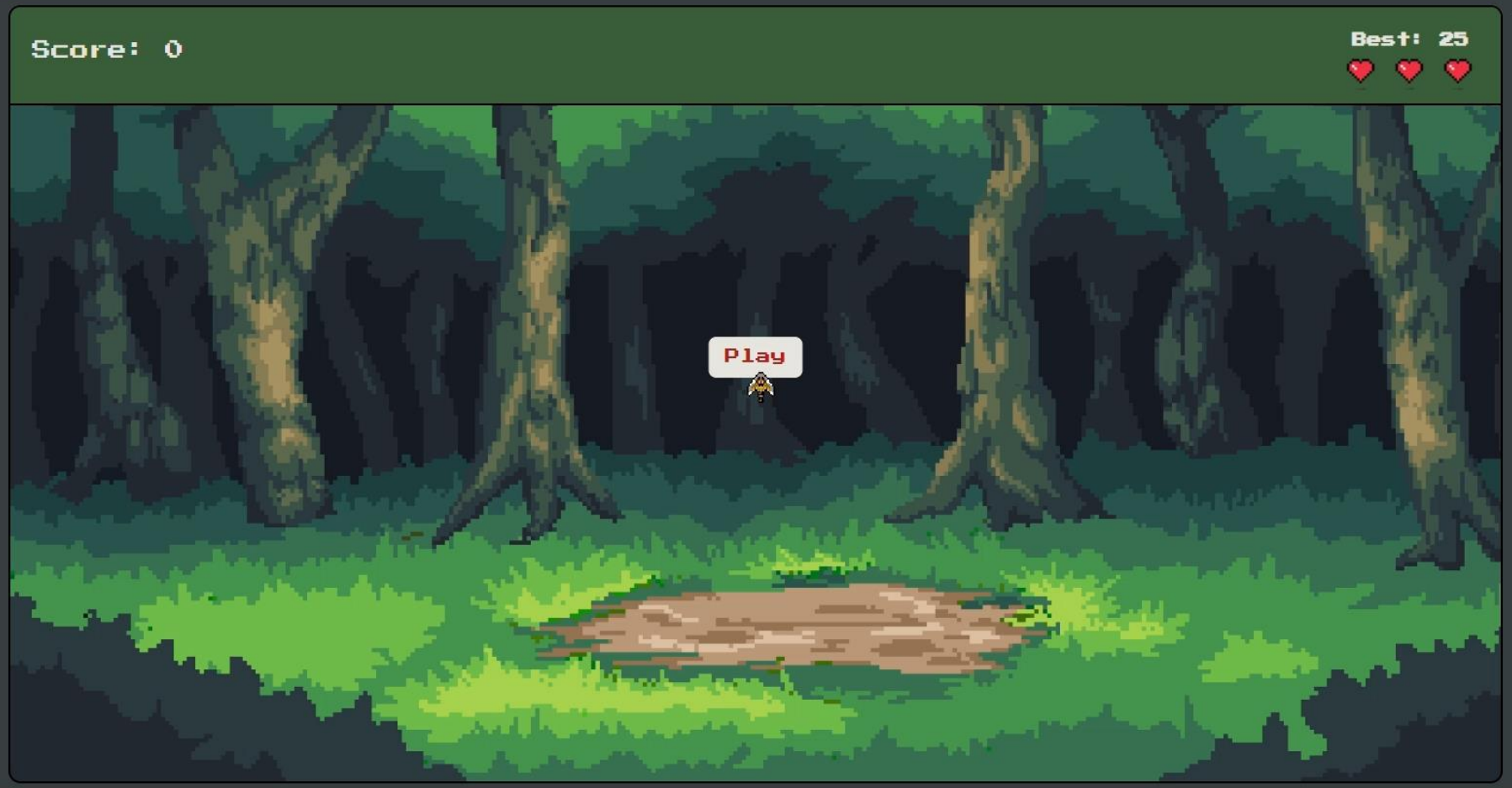
- Successfully created an interactive, secure, and user-friendly web application for visualizing environmental data.

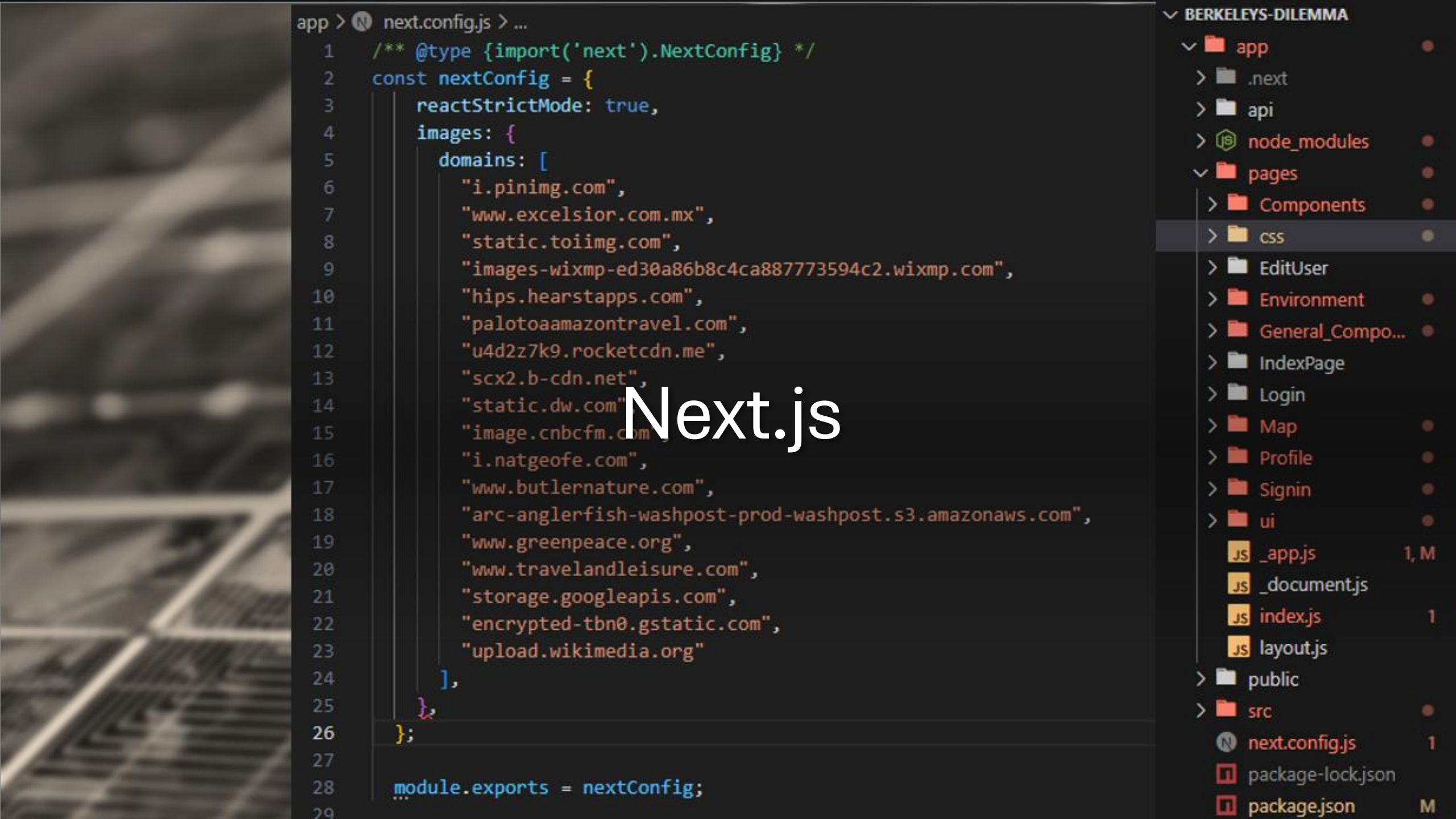


- We add a game to make more interactive the page. And to see who is the best with the mouse aim

Berkeley's Dilemma

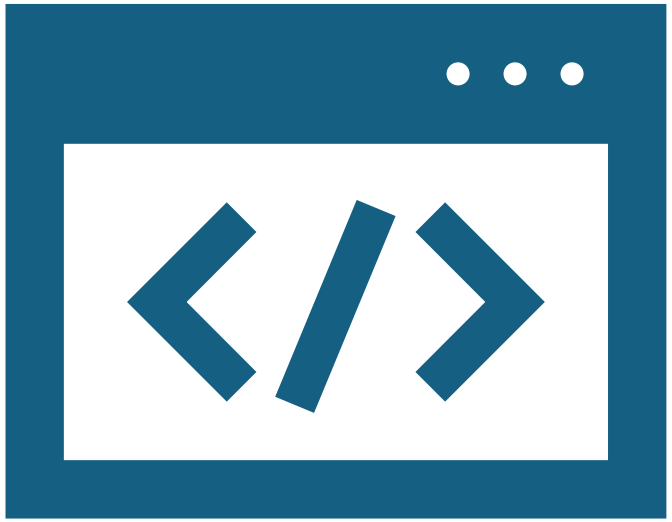
=




app > next.config.js > ...
/** @type {import('next').NextConfig} */
const nextConfig = {
reactStrictMode: true,
images: {
domains: [
"i.pinimg.com",
"www.excelsior.com.mx",
"static.toiimg.com",
"images-wixmp-ed30a86b8c4ca887773594c2.wixmp.com",
"hips.hearstapps.com",
"palotoaamazontravel.com",
"u4d2z7k9.rocketcdn.me",
"scx2.b-cdn.net",
"static.dw.com",
"image.cnbcfm.com",
"i.natgeofe.com",
"www.butlernature.com",
"arc-anglerfish-washpost-prod-washpost.s3.amazonaws.com",
"www.greenpeace.org",
"www.travelandleisure.com",
"storage.googleapis.com",
"encrypted-tbn0.gstatic.com",
"upload.wikimedia.org"
],
},
};
module.exports = nextConfig;
Next.js
BERKELEYS-DILEMMA
app
.next
api
node_modules
pages
Components
css
EditUser
Environment
General_Compo...
IndexPage
Login
Map
Profile
Signin
ui
_app.js
_document.js
index.js
layout.js
public
src
next.config.js
package-lock.json
package.json

What is it?

- Next.js is a React framework that enables server-side rendering and static site generation out of the box, enhancing performance and SEO, and we integrate it to our page.



Changes Saved!

Your updated information is as follows:

Thank you for keeping your details up to date. Here's what you've changed:

Name: mauro
Email: 0262146@up.edu.mx
Username: 0262146

Feel free to reach out if you have any questions or need further assistance.

> *"The best way to predict the future is to create it."*
>
> — Peter Drucker

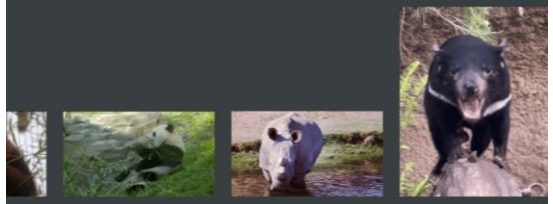
Thank you for your commitment!

Keep on Killing

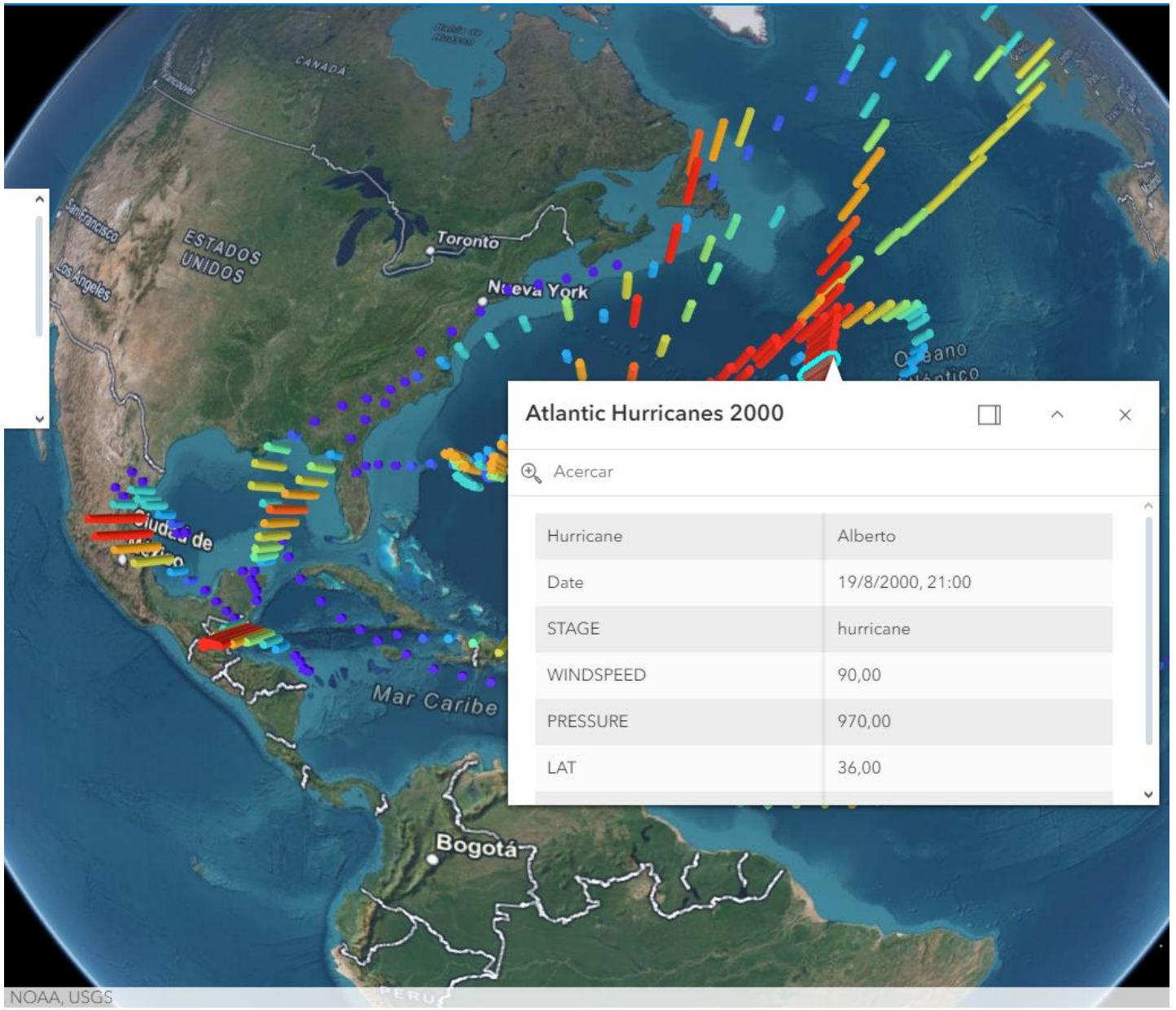
Your hypocrisy is burning the planet down, causing hurricanes, death, and extinctio

rld suffocates under the weight of your decisions. Every luxury, every convenience, every act
apathy—is fuel to the fire that's reducing our world to as

Here are the innocent lives you're wiping out without a second thoug



ople would kill a man to take the fat from his corpse and use it to grease their boots."



Atlantic Hurricanes 2000

Acercar

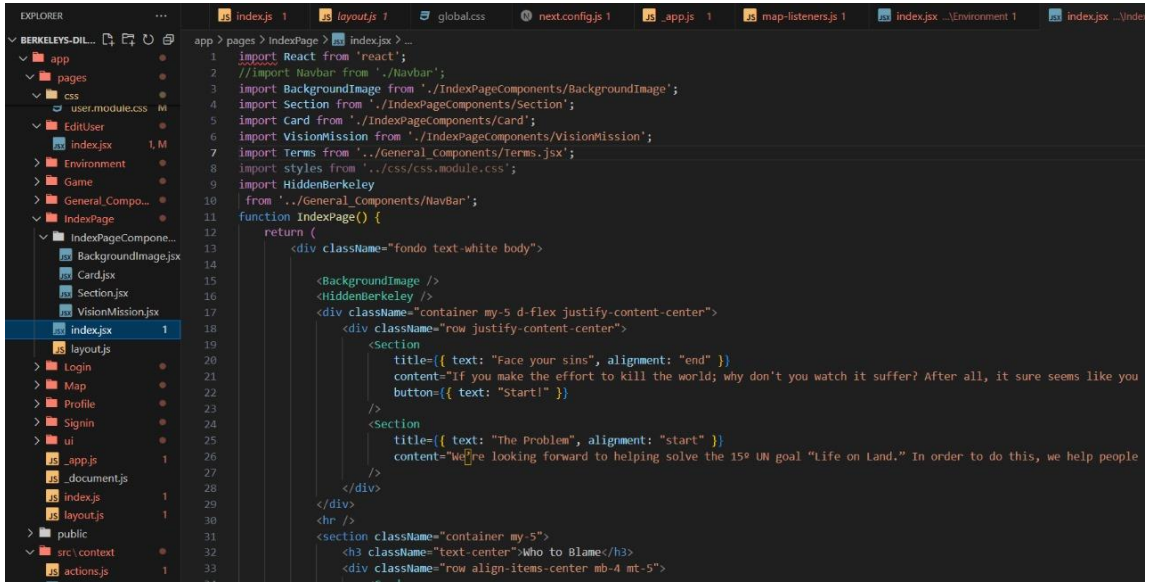
Hurricane	Alberto
Date	19/8/2000, 21:00
STAGE	hurricane
WINDSPEED	90,00
PRESSURE	970,00
LAT	36,00

```
// Google OAuth2 client setup
const oAuth2Client = new google.auth.OAuth2(CLIENT_ID, CLIENT_SECRET, REDIRECT_URI);
oAuth2Client.setCredentials({ refresh_token: REFRESH_TOKEN }); // Set refresh token

// Email sending function
async function sendMail(sendEmail) {
    try {
        console.log("/Attempting to obtain access token...");
        const accesToken = await oAuth2Client.getAccessToken(); // Obtain access token
        console.log("//Access token obtained.");

        const transport = nodemailer.createTransport({
            service: 'gmail', // Use Gmail service
            auth: {
                type: 'OAuth2',
                user: EMAIL,
                clientId: CLIENT_ID,
                clientSecret: CLIENT_SECRET,
                refreshToken: REFRESH_TOKEN,
                accessToken: accesToken, // Use access token
            },
            tls: {
                rejectUnauthorized: false // Allow self-signed certificates
            }
        });

        console.log("///Transport created, preparing email options...");
        // Define email options
        const mailOptions = {
            from: `Berkeley's Dilemma <${EMAIL}>`,
            to: sendEmail,
            subject: 'Welcome to Berkeleys Dilemma!',
            text: 'Thank you for signing up!',
            html: '<div style="font-family: Arial, sans-serif; color: #E7E5DF; line-height: 1.6; background-color: #393e41; padding: 20px;
            text-align: right;"><h1 style="color: #FF7F11; font-size: 2.5em; margin: 0;">Keep on Killing!</h1><h3 style="color: #FF7F11;
            ">Your hypocrisy is burning the planet down, causing <strong>hurricanes</strong>, <strong>death</strong>, and <strong>extinction
            strong>.</h3><p style="font-size: 1.2em; margin: 20px 0;">Feel the satisfaction? Enjoy watching as the world suffocates under the
```


EXPLORER
index.js 1
layout.js 1
global.css
next.config.js 1
_app.js 1
map-listeners.js 1
index.jsx ...\Environment 1
index.jsx ...\Inde
app > pages > IndexPage > index.jsx > ...
BERKELEYS-DIL...
app
pages
css
user.module.css M
EditUser
index.jsx 1, M
Environment
Game
General_Compo...
IndexPage
IndexPageCompone...
BackgroundImage.jsx
Card.jsx
Section.jsx
VisionMission.jsx
index.jsx 1
layout.js
Login
Map
Profile
Signin
ui
_app.js 1
_document.js
index.js 1
layout.js 1
public
src\context
actions.js 1
1 import React from 'react';
2 //import Navbar from './Navbar';
3 import BackgroundImage from './IndexPageComponents/BackgroundImage';
4 import Section from './IndexPageComponents/Section';
5 import Card from './IndexPageComponents/Card';
6 import VisionMission from './IndexPageComponents/VisionMission';
7 import Terms from '../General_Components/Terms.jsx';
8 import styles from '../css/css.module.css';
9 import HiddenBerkeley
10 from '../General_Components/NavBar';
11 function IndexPage() {
12 return (
13
14
15 <BackgroundImage />
16 <HiddenBerkeley />
17
18
19 <Section
20 title={{ text: "Face your sins", alignment: "end" }}
21 content="If you make the effort to kill the world; why don't you watch it suffer? After all, it sure seems like you
22 button={{ text: "Start!" }}
23 />
24 <Section
25 title={{ text: "The Problem", alignment: "start" }}
26 content="We're looking forward to helping solve the 15º UN goal “Life on Land.” In order to do this, we help people
27 />
28
29
30 <hr />
31 <section className="container my-5">
32 <h3 className="text-center">Who to Blame</h3>
33
```

```
app > pages > css > global.css > html
27
28 .titles{
29   height: 6em;
30 }
31
32 h1, h2{
33   font-family: var(--font-bebas-neue);
34   font-size: 40px;
35   color: #E7E5DF;
36 }
37
38 h3, h4{
39   font-family: var(--font-poppins);
40   font-size: 2em;
41   color: #E7E5DF;
42 }
43
44 h6{
45   font-family: var(--font-poppins);
46   font-size: 0.5em;
47   color: #E7E5DF;
48 }
49
50 .start-btn{
51   height: 2.5em;
52   width: 9em;
53   background: #e7e5df00;
54   border: 1px;
55   border-radius: 7px;
56   border-style: solid;
57   border-color: #E7E5DF;
58   color: #E7E5DF;
59   transition: 0.3s;
60 }
```
```

THKS for paying atetion ☺