# Project Report

## Creation of Single Page Website

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# ABSTRACT

This report documents the development of a single-page portfolio website designed to showcase professional skills and projects. Built using modern web technologies (HTML5, CSS3, JavaScript), the website emphasizes responsive design, user-friendly navigation, and aesthetic presentation. The project followed a structured development process from initial concept to final deployment, incorporating best practices in web development and accessibility standards.

# OBJECTIVE

1. Develop a responsive single-page website with four core sections:

    - About Me
    - Skills
    - Projects
    - Contact

2. Implement modern CSS features:

    - Flexbox/Grid layouts
    - CSS animations
    - Media queries for responsiveness

3. Ensure compliance with:

    - W3C standards
    - WCAG

4. Optimize performance metrics:

    - Page load time < 2s

# INTRODUCTION

## 1. Importance of Portfolio Websites

In the digital age, portfolios serve as critical tools for professionals to:

-   Demonstrate technical capabilities
-   Showcase completed projects
-   Establish online presence
-   Network with potential employers/clients

## 2. Single-Page Design Advantages

Key benefits of single-page layouts:

-   Seamless user experience without page reloads
-   Simplified navigation through anchor links
-   Mobile-first compatibility
-   Faster initial load times

## 3. Technical Stack Justification

-   HTML5: Semantic structure
-   CSS3: Visual styling & animations
-   JavaScript: Interactive features
-   Git: Version control

## 4. Target Audience

Primary users:

-   Hiring managers
-   Potential clients

Secondary users:

-   Peers in the industry
-   Open source collaborators

# METHODOLOGY

## 1. Planning Phase (1 Days)

- Defined project scope
- Created user personas
- Selected color palette & typography

## 2. Wireframing (1 Days)

- Created 3 layout variations
- Finalized responsive breakpoints

## 3. Development (3 Days)

HTML Structure:

- Semantic elements (header, section, article)

CSS Implementation:

- Mobile-first approach
- CSS variables for theming
- Animation keyframes

JavaScript Features:

- Scroll event listeners
- Dynamic content loading

## 4. Testing (1 Days)

- Cross-browser testing (Chrome, Firefox, Safari)
- Device testing (Desktop, Tablet, Mobile)
- Performance optimization

## 5. Deployment (1 Day)

- Configured GitHub Pages

# HTML CODE

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0, maximum-scale=1.0, user-scalable=no">
  <title>Document</title>
  <link rel="stylesheet" href="https://unpkg.com/aos@next/dist/aos.css" />
  <link rel="stylesheet" href="style.css">
  <link href='https://unpkg.com/boxicons@2.1.4/css/boxicons.min.css' rel='stylesheet'>
</head>
<body>
  <video autoplay loop muted playsinline class="back-vid">
    <source src="galaxy.mp4" type="video/mp4">
  </video>
  <section class="main-section">
    <nav>
        <h1 data-aos="zoom-in" data-aos-duration="1000"><span style="color: #4acfee;">A</span>RPAN</h1>
      <ul>
        <li data-aos="fade-up" data-aos-duration="1000" data-aos-delay="100"><a class="active" href="#">Home </a></li>
        <li data-aos="fade-up" data-aos-duration="1000" data-aos-delay="200"><a href="#">About</a></li>
        <li data-aos="fade-up" data-aos-duration="1000" data-aos-delay="300"><a href="#">Projects</a></li>
        <li data-aos="fade-up" data-aos-duration="1000" data-aos-delay="400"><a href="#">Skills</a></li>
        <li data-aos="fade-up" data-aos-duration="1000" data-aos-delay="500"><a href="#">Content</a></li>
      </ul>
```

```html
    </nav>


    <div class="me">
      <div class="my-info">
        <h1 data-aos="fade-right" data-aos-duration="1000" data-aos-delay="700">Hi, I'm Arpan Gupta</h1>

        <h2 data-aos="fade-left" data-aos-duration="1000" data-aos-delay="900">I'm a Web-Developer</h2>

        <p data-aos="flip-down" data-aos-duration="1000" data-aos-delay="1000">A web developer who builds clean, responsive websites with modern technologies. Let's bring your ideas to life!</p>
        <div class="Buttons">
          <button class="btn" data-aos="zoom-in-right" data-aos-duration="1000" data-aos-delay="1100">Hire me</button>

          <ul class="ul-icons">
            <li><a href="https://github.com/arpangupta-git" data-aos="fade-up" data-aos-duration="1000" data-aos-delay="1200"><i class='bx bxl-github'></i></a></li>

            <li><a href="https://www.linkedin.com/in/arpan-gupta-117a40309" data-aos="fade-up" data-aos-duration="1000" data-aos-delay="1300"><i class='bx bxl-linkedin'></i></a></li>

            <li><a href="https://www.instagram.com/arpangupta.in?igsh=dWh6MzFycDFya2d1" data-aos="fade-up" data-aos-duration="1000" data-aos-delay="1500"><i class='bx bxl-instagram'></i></a></li>

          </ul>
        </div>
      </div>
      <div class="my-img" data-aos="zoom-in-left" data-aos-duration="2500">
        <img src="2310294-removebg.png" alt="my-img" >
      </div>
    </div>
    <div class="info-sec">
        <div class="info-card" data-aos="fade-in" data-aos-duration="1000" data-aos-delay="1600">
      <h1>1+</h1>
      <p>Years of <br> Experience</p>
```

```html
        </div>
        <div class="info-card" data-aos="fade-in" data-aos-duration="1000" data-aos-delay="1700">
            <h1>5+</h1>
            <p>Technical <br> Skills</p>
        </div>
        <div class="info-card" data-aos="fade-in" data-aos-duration="1000" data-aos-delay="1800" data-aos-mobile-delay="100">
            <h1>2+</h1>
            <p>Projects <br> Completed</p>
        </div>
    </div>
  </section>
  <script src="script.js"></script>
</body>
</html>
```

# CSS CODE

```css
*{
    margin: 0;
    padding: 0;
    box-sizing: border-box;
    font-family: Arial, Helvetica, sans-serif;
}

body{
    position: relative;
    height: fit-content;
    width:100%;
    height: 100vh;
    overflow: hidden;
    display: flex;
    padding: 30px 0;
    justify-content: center;
    align-items: center;
}

.back-vid{
    position: absolute;
    left: 0;
    top: 0;
    z-index: -1;
}

.main-section{
    width: 90%;
    height: 90%;
```

```css
  background-color:#4ad0ee1b;

  backdrop-filter: blur(10px);

  border-radius: 50px;

  box-shadow: 0 0 20px #4acfee;

}

nav{

  display: flex;

  justify-content: space-between;

  align-items: center;

  padding: 30px 40px;

}

nav h1{

  color: white;

  font-size: 30px;

  font-weight: 900;

}

nav ul{

  list-style: none;

  display: flex;

}

nav a{

  color: white;

  text-decoration: none;

  font-size: 20px;

  font-weight: bold;

  transition: 0.2s;

  padding: 0px 25px;
```

```css
}

nav a:hover ,
.active {
  color : #4acfee;
  text-decoration: underline;
}

.me{
  display: flex;
  align-items: center;
  height: 70%;
  padding: 0 10%;
  color: white;
  justify-content: space-between;
}

.me h1{
  font-size: 60px;
}

.me h2{
  margin-top: 20px;
  font-size: 30px;
  text-transform: uppercase;
  background:linear-gradient(to right, #4acfee, #53f8c9, #6070fd, #5bbdff, #4acfee);
  background-size: 200%;
  background-clip: text;
  -webkit-background-clip: text;
  -webkit-text-fill-color: transparent;
  animation: animate-gradient 2.5s linear infinite;
```

```css
    }

.me p{
  max-width: 450px;
  margin-top: 7px;
  margin-bottom: 20px;
}

@keyframes animate-gradient {
  to {
    background-position: 200%;
  }
}

.Buttons{
  display: flex;
}

.btn{
  display: inline-block;
  padding: 15px 30px;
  background-color: #4acfee;
  border: 2px solid #4acfee;
  border-radius: 40px;
  box-shadow: 0 0 10px #4acfee;
  font-size: 16px;
  font-weight: 900;
  color: #0e1217;
  cursor: pointer;
  margin-right: 15px;
  transition: 0.3s;
```

```css
  text-wrap: nowrap;
}


.btn:hover{
  background-color: transparent;
  box-shadow: none;
  color: #4acfee;
}


.ul-icons{
  display: flex;
  align-items: center;
}


.ul-icons li{
  list-style: none;
  margin-left: 10px;
}


.ul-icons a{
  display: inline-flex;
  padding: 8px;
  border: 2px solid #4acfee;
  border-radius: 50%;
  font-size: 20px;
  color: #4acfee;
  text-decoration: none;
  margin: 0 7px;
  transition: 0.3s;
}
```

```css
.ul-icons a:hover{
  background: #4acfee;
  color: #0e1217;
  box-shadow: 0 0 10px #4acfee;
}

.my-img{
  width: 400px;
  height: 400px;
  background-color: none;
  position:relative;
  border-radius: 50%;
  display: flex;
  justify-content: center;
  overflow: hidden;
  box-shadow: 0 0 10px #4eddfd;
  transition: 0.5s;
}

.my-img:hover{
  box-shadow: 0 0 25px #4acfee;
}

.my-img img{
  position: absolute;
  width: 85%;
  mix-blend-mode: lighten;
}

.info-sec{
  display: flex;
```

```css
  width: 100%;

  gap: 20px;

  padding: 0 10%;

  flex-wrap: wrap;

  justify-content: space-between;


}


.info-card{

  display: flex;

  width: 100%;

  align-items: center;

  max-width: fit-content;

}


.info-sec h1{

  font-size: 55px;

  text-transform: uppercase;

  background:linear-gradient(to right, #4acfee, #53f8c9, #6070fd, #5bbdff, #4acfee);

  background-size: 200%;

  background-clip: text;

  -webkit-background-clip: text;

  -webkit-text-fill-color: transparent;

  animation: animate-gradient 2.5s linear infinite;

  margin-right: 10px;

}


.info-sec p{

  color: white;

  font-size: 20px;

}
```

```css
@media (min-width: 1220px) {

  body{

    width: 100%;

    height: 100vh;

    overflow: hidden;

  }


  .info-sec{

    margin-top: 30px;

  }

}


@media (max-width: 768px) {

 body {

  padding: 15px 0;

  overflow-y: auto;

 }


 nav {

  padding: 20px;

  position: relative;

 }


 nav ul {

  display: none;

  position: absolute;

  top: 100%;

  left: 0;

  right: 0;

  background: #0e1217e3;
```

```css
  flex-direction: column;
  align-items: center;
  padding: 20px 0;
  z-index: 1000;
}

nav ul.active {
  display: flex;
}

nav ul li {
  margin: 10px 0;
}

nav ul li a {
  padding: 10px;
}

.menu-toggle {
  display: block;
  color: white;
  font-size: 24px;
  cursor: pointer;
}

.me {
  flex-direction: column;
  height: auto;
  padding: 30px 20px;
  text-align: center;
}
```

```css
.my-info {
  order: 2;
  margin-top: 30px;
}

.my-img {
  width: 250px;
  height: 250px;
  order: 1;
}

.me h1 {
  font-size: 36px;
}

.me h2 {
  font-size: 24px;
  margin-top: 15px;
}

.me p {
  font-size: 16px;
  max-width: 100%;
}

.Buttons {
  flex-direction: column;
  align-items: center;
}
```

```css
.btn {
  margin: 10px 0;

  width: 100%;

  max-width: 200px;
}

.info-sec {
  flex-direction: column;

  align-items: center;

  padding: 0 20px;
}

.info-card {
  margin: 10px 0;

  justify-content: center;

  text-align: center;
}

.info-sec h1 {
  font-size: 40px;
}

.info-sec p {
  font-size: 16px;
}

.main-section {
  height: auto;

  border-radius: 20px;

  padding-top: 50px;
}
```

```css
  .back-vid {
    height: 120vh;
  }
}

@media (max-width: 480px) {
  nav h1 {
    font-size: 24px;
  }

  .me h1 {
    font-size: 28px;
  }

  .me h2 {
    font-size: 20px;
  }

  .my-img {
    width: 200px;
    height: 200px;
  }
}
```
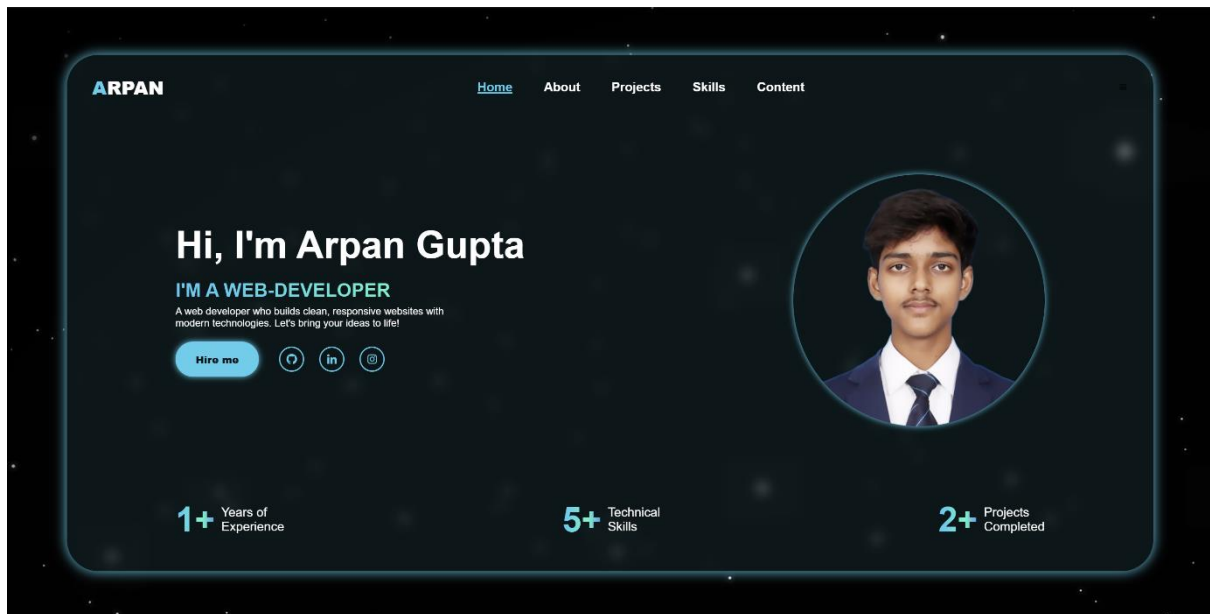
# JAVASCRIPT CODE

```javascript
document.addEventListener('DOMContentLoaded', function() {
  const elements = document.querySelectorAll('[data-aos]');


  const observer = new IntersectionObserver(function(entries) {
    entries.forEach(entry => {
      if (entry.isIntersecting) {
        entry.target.classList.add('aos-animate');
      } else {
        entry.target.classList.remove('aos-animate');
      }
    });
  }, { threshold: 0.2 });
  elements.forEach(element => observer.observe(element));
});


const menuToggle = document.createElement('i');
menuToggle.className = 'bx bx-menu menu-toggle';
document.querySelector('nav').appendChild(menuToggle);
const navUL = document.querySelector('nav ul');
menuToggle.addEventListener('click', () => {
  navUL.classList.toggle('active');
});


document.addEventListener('click', (e) => {
  if (!e.target.closest('nav')) {
    navUL.classList.remove('active');
  }
});
```
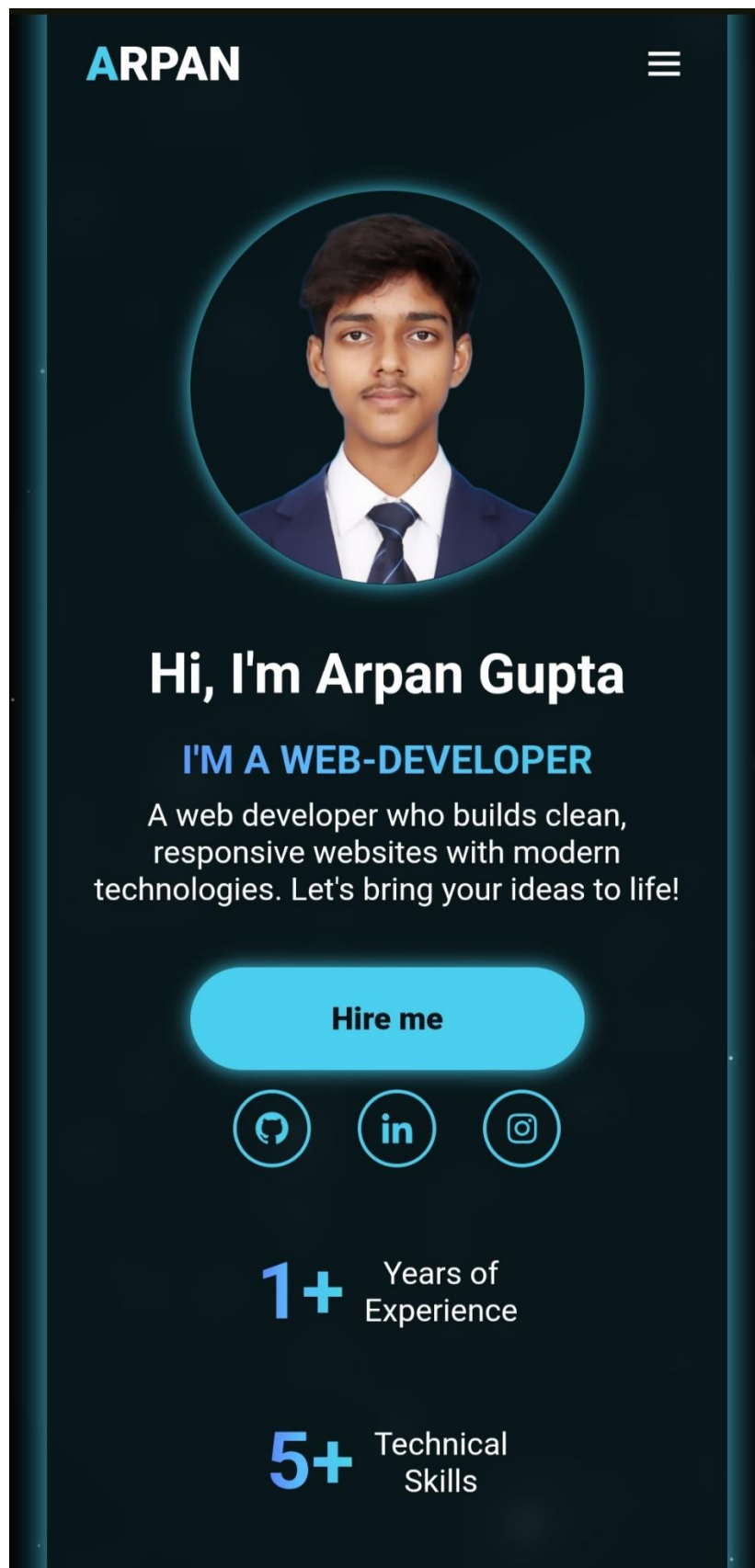
# CONCLUSION

The single-page portfolio website successfully demonstrates modern web development practices through:

1. Responsive Design: Seamless adaptation from mobile to desktop views
2. Accessibility: WCAG compliance with proper contrast ratios and ARIA labels
3. Maintainability: Clean code structure with CSS variables and modular JavaScript

Future enhancements could include integrating a backend for dynamic content updates or adding dark mode functionality through CSS custom properties.