

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>DigitAI - Handwritten Digit Recognition with Deep Learning</title>
  <style>
    :root {
      --primary: #4a6fa5;
      --secondary: #166088;
      --accent: #4fc3f7;
      --light: #f8f9fa;
      --dark: #212529;
    }

    body {
      font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
      line-height: 1.6;
      color: var(--dark);
      margin: 0;
      padding: 0;
      background-color: var(--light);
    }

    header {
      background: linear-gradient(135deg, var(--primary), var(--secondary));
      color: white;
      padding: 2rem 0;
      text-align: center;
    }

    .container {
      width: 85%;
      max-width: 1200px;
      margin: 0 auto;
    }

    nav {
      display: flex;
      justify-content: space-between;
      align-items: center;
      padding: 1rem 0;
    }

    .logo {
      font-size: 1.8rem;
      font-weight: bold;
    }

    .nav-links a {
      color: white;
      text-decoration: none;
      margin-left: 1.5rem;
      transition: all 0.3s ease;
    }
  </style>
</head>
<body>
  <div class="container">
    <div class="header">
      <h1>DigitAI</h1>
      <h2>Handwritten Digit Recognition</h2>
    </div>
    <div class="nav">
      <div class="logo">DigitAI</div>
      <div class="nav-links">
        <a href="#home">Home</a>
        <a href="#about">About</a>
        <a href="#services">Services</a>
        <a href="#contact">Contact</a>
      </div>
    </div>
    <div class="main-content">
      <div class="hero">
        <h3>Revolutionizing Handwritten Digit Recognition</h3>
        <p>Experience the power of Deep Learning in digit recognition. Our advanced AI model provides accurate and fast results for your handwritten digits. Join us today to explore the future of digit recognition technology.</p>
      </div>
      <div class="features">
        <div class="feature">
          <h4>High Accuracy</h4>
          <p>Our AI model achieves state-of-the-art accuracy in digit recognition, ensuring reliable results for your data.</p>
        </div>
        <div class="feature">
          <h4>Fast Processing</h4>
          <p>Experience lightning-fast digit recognition with our optimized AI algorithms, reducing processing time significantly.</p>
        </div>
        <div class="feature">
          <h4>Scalable Solution</h4>
          <p>Our digit recognition system is highly scalable, allowing you to process large volumes of data efficiently.</p>
        </div>
        <div class="feature">
          <h4>Easy Integration</h4>
          <p>Integrate our digit recognition API into your existing applications with minimal effort and resources.</p>
        </div>
      </div>
      <div class="cta">
        <h3>Get Started Today</h3>
        <p>Sign up for our digit recognition service and experience the future of AI-powered digit recognition. Contact us now to learn more and get started.</p>
      </div>
    </div>
    <div class="footer">
      <p>© 2024 DigitAI. All rights reserved. | Privacy Policy | Terms of Service</p>
    </div>
  </div>
</body>
</html>
```

```
.nav-links a:hover {
  color: var(--accent);
}

.hero {
  padding: 4rem 0;
  text-align: center;
}

.hero h1 {
  font-size: 3rem;
  margin-bottom: 1rem;
}

.hero p {
  font-size: 1.2rem;
  max-width: 700px;
  margin: 0 auto 2rem;
}

.btn {
  display: inline-block;
  background-color: var(--accent);
  color: white;
  padding: 0.8rem 1.5rem;
  border-radius: 5px;
  text-decoration: none;
  font-weight: bold;
  transition: all 0.3s ease;
}

.btn:hover {
  background-color: #3da8d8;
  transform: translateY(-3px);
}

section {
  padding: 4rem 0;
}

.section-title {
  text-align: center;
  margin-bottom: 3rem;
}

.features {
  display: grid;
  grid-template-columns: repeat(auto-fit, minmax(300px, 1fr));
  gap: 2rem;
}

.feature-card {
  background: white;
  border-radius: 8px;
  padding: 2rem;
  box-shadow: 0 5px 15px rgba(0,0,0,0.1);
}
```

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        transition: transform 0.3s ease;
    }

    .feature-card:hover {
        transform: translateY(-10px);
    }

    .feature-card h3 {
        color: var(--primary);
    }

    .demo-container {
        background: white;
        border-radius: 8px;
        padding: 2rem;
        box-shadow: 0 5px 15px rgba(0,0,0,0.1);
        text-align: center;
    }

    .canvas-container {
        margin: 0 auto;
        width: 300px;
        position: relative;
    }

    #drawing-canvas {
        border: 2px solid var(--secondary);
        border-radius: 8px;
        background-color: white;
        cursor: crosshair;
    }

    .canvas-controls {
        margin: 1rem 0;
    }

    .prediction-result {
        font-size: 1.5rem;
        font-weight: bold;
        color: var(--secondary);
        margin-top: 1rem;
    }

    footer {
        background-color: var(--dark);
        color: white;
        text-align: center;
        padding: 2rem 0;
        margin-top: 2rem;
    }
</style>
</head>
<body>
<header>
<div class="container">
    <nav>

```

```

<div class="logo">DigitAI</div>
<div class="nav-links">
  <a href="#about">About</a>
  <a href="#features">Features</a>
  <a href="#demo">Demo</a>
  <a href="#applications">Applications</a>
  <a href="#contact">Contact</a>
</div>
</nav>

<div class="hero">
  <h1>Handwritten Digit Recognition with Deep Learning</h1>
  <p>Revolutionizing AI applications with state-of-the-art neural networks that accurately interpret handwritten digits for smarter digital solutions.</p>
  <a href="#demo" class="btn">Try Live Demo</a>
</div>
</header>

<section id="about">
  <div class="container">
    <h2 class="section-title">About Our Technology</h2>
    <div class="about-content">
      <p>DigitAI leverages convolutional neural networks (CNNs) trained on the MNIST dataset to achieve over 99% accuracy in recognizing handwritten digits. Our deep learning model transforms handwritten input into digital data, enabling seamless integration with various applications.</p>
      <p>The system continuously improves through transfer learning techniques, adapting to diverse handwriting styles and evolving to meet the needs of modern AI applications in document processing, form digitization, and smart data entry systems.</p>
    </div>
  </div>
</section>

<section id="features" style="background-color: #f0f4f8;">
  <div class="container">
    <h2 class="section-title">Key Features</h2>
    <div class="features">
      <div class="feature-card">
        <h3>High Accuracy</h3>
        <p>Our CNN model achieves 99.2% accuracy on the MNIST test set, with specialized techniques to handle challenging handwriting styles.</p>
      </div>
      <div class="feature-card">
        <h3>Real-time Processing</h3>
        <p>Optimized neural network architecture delivers lightning-fast predictions, enabling seamless user experiences in applications.</p>
      </div>
      <div class="feature-card">
        <h3>Adaptive Learning</h3>
        <p>The system continuously improves through transfer learning, adapting to new handwriting styles and use cases.</p>
      </div>
    </div>
  </div>
</section>

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<section id="demo">
  <div class="container">
    <h2 class="section-title">Interactive Demo</h2>
    <div class="demo-container">
      <p>Draw a digit (0-9) in the box below and see our AI model recognize it in real-time:</p>

      <div class="canvas-container">
        <canvas id="drawing-canvas" width="300" height="300"></canvas>
      </div>

      <div class="canvas-controls">
        <button id="clear-btn" class="btn">Clear</button>
        <button id="predict-btn" class="btn">Recognize Digit</button>
      </div>

      <div class="prediction-result">
        Prediction: <span id="prediction-output">-</span>
      </div>

      <div id="confidence-meter" style="margin-top: 1rem;">
        Confidence: <span id="confidence-value">0%</span>
        <div style="width: 100%; background-color: #e0e0e0; border-radius: 5px; margin-top: 0.5rem;">
          <div id="confidence-bar" style="height: 20px; width: 0%; background-color: var(--accent); border-
radius: 5px;"></div>
        </div>
      </div>
    </div>
  </div>
</section>

<section id="applications" style="background-color: #f0f4f8;">
  <div class="container">
    <h2 class="section-title">AI Applications</h2>
    <div class="features">
      <div class="feature-card">
        <h3>Document Digitization</h3>
        <p>Automate the conversion of handwritten forms, surveys, and documents into digital data with high
accuracy.</p>
      </div>
      <div class="feature-card">
        <h3>Banking & Finance</h3>
        <p>Process checks, deposit slips, and financial forms without manual data entry, reducing errors and
costs.</p>
      </div>
      <div class="feature-card">
        <h3>Educational Tools</h3>
        <p>Create interactive learning applications that can read and evaluate handwritten answers and
assignments.</p>
      </div>
    </div>
  </div>
</section>

<section id="contact">
  <div class="container">
    <h2 class="section-title">Get In Touch</h2>

```

```
    <div style="text-align: center; max-width: 600px; margin: 0 auto;">
      <p>Interested in integrating our handwritten digit recognition technology into your application? Contact
our team to learn more about our API and customization options.</p>
      <a href="mailto:contact@digitai.com" class="btn">Contact Us</a>
    </div>
  </div>
</section>
```

```
<footer>
  <div class="container">
    <p>&copy; 2023 DigitAI - Handwritten Digit Recognition System. All rights reserved.</p>
    <p>Powered by Deep Learning and Neural Networks.</p>
  </div>
</footer>
```

```
<script>
  // Canvas drawing functionality
  const canvas = document.getElementById('drawing-canvas');
  const ctx = canvas.getContext('2d');
  let isDrawing = false;
```

```
  // Set canvas background to white
  ctx.fillStyle = 'white';
  ctx.fillRect(0, 0, canvas.width, canvas.height);
  ctx.strokeStyle = '#000000';
  ctx.lineWidth = 15;
  ctx.lineCap = 'round';
```

```
  // Drawing functions
  canvas.addEventListener('mousedown', startDrawing);
  canvas.addEventListener('mousemove', draw);
  canvas.addEventListener('mouseup', stopDrawing);
  canvas.addEventListener('mouseout', stopDrawing);
```

```
  // Touch support for mobile devices
  canvas.addEventListener('touchstart', handleTouch);
  canvas.addEventListener('touchmove', handleTouch);
  canvas.addEventListener('touchend', stopDrawing);
```

```
function handleTouch(e) {
  e.preventDefault();
  const touch = e.touches[0];
  const mouseEvent = {
    clientX: touch.clientX,
    clientY: touch.clientY
  };

  if (e.type === 'touchstart') {
    startDrawing(mouseEvent);
  } else if (e.type === 'touchmove') {
    draw(mouseEvent);
  }
}
```

```
function startDrawing(e) {
  isDrawing = true;
```

```

    draw(e);
  }

function draw(e) {
  if (!isDrawing) return;

  const rect = canvas.getBoundingClientRect();
  const x = e.clientX - rect.left;
  const y = e.clientY - rect.top;

  ctx.lineTo(x, y);
  ctx.stroke();
  ctx.beginPath();
  ctx.moveTo(x, y);
}

function stopDrawing() {
  isDrawing = false;
  ctx.beginPath();
}

// Clear canvas
document.getElementById('clear-btn').addEventListener('click', function() {
  ctx.fillStyle = 'white';
  ctx.fillRect(0, 0, canvas.width, canvas.height);
  document.getElementById('prediction-output').textContent = '-';
  document.getElementById('confidence-value').textContent = '0%';
  document.getElementById('confidence-bar').style.width = '0%';
});

// Predict digit (mock functionality - in a real app this would call your ML model)
document.getElementById('predict-btn').addEventListener('click', function() {
  // In a real implementation, you would:
  // 1. Get the image data from canvas
  // 2. Preprocess it (resize, normalize, etc.)
  // 3. Send to your ML model (could be TensorFlow.js in browser or API call)
  // 4. Display the prediction result

  // For this demo, we'll simulate a prediction
  const randomDigit = Math.floor(Math.random() * 10);
  const randomConfidence = (Math.random() * 50 + 50).toFixed(1);

  document.getElementById('prediction-output').textContent = randomDigit;
  document.getElementById('confidence-value').textContent = randomConfidence + '%';
  document.getElementById('confidence-bar').style.width = randomConfidence + '%';
});
</script>
</body>
</html>

```