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**SURAT KETERANGAN
HASIL PENGECEKAN TURNITIN**

UPT Perpustakaan Universitas Darma Persada menerangkan telah selesai melakukan pemeriksaan duplikasi/*similarity* menggunakan perangkat lunak Turnitin terhadap hasil karya sebagai berikut:

Judul : ANALISIS SENTIMEN TERHADAP UNIVERSITAS DHARMA
PERSADA MENGGUNAKAN METODE TRANSFORMER

Penulis : Hafiz mufti nazar

NIM : 2021230004

Tgl pemeriksaan : 25 Juli 2025

Dengan hasil Tingkat Kesamaan (*similarity index*) **16%**

Demikian Surat Keterangan kami buat, untuk dipergunakan sebagaimana mestinya.

Jakarta, 25 Juli 2025

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Batas maksimal similarity 25% untuk Fakultas Teknik, Kelautan
dan Pasca Sarjana

Source code

Admin.php

```
1. <?php
2. session_start();
3.
4. $host = "localhost";
5. $user = "root";
6. $pass = "";
7. $db = "sentimen_db";
8. $conn = new mysqli($host, $user, $pass, $db);
9. if ($conn->connect_error) die("Koneksi gagal: " . $conn-
    >connect_error);
10.
11.// Fungsi analisis sentimen ke API IndoBERT
12.function analisisSentimen($komentar) {
13.    $api_url = 'http://localhost:5000/predict'; // ganti dengan
    endpoint modelmu
14.    $data = ['text' => $komentar];
15.
16.    $options = [
17.        'http' => [
18.            'method' => 'POST',
19.            'header' => "Content-Type: application/json",
20.            'content' => json_encode($data)
21.        ]
22.    ];
23.    $context = stream_context_create($options);
24.    $result = @file_get_contents($api_url, false, $context);
25.
26.    if ($result === FALSE) return 'netral';
```

```

27.     $response = json_decode($result, true);
28.     return $response['label'] ?? 'netral';
29.}
30.
31.if (!isset($_SESSION['rawData'])) $_SESSION['rawData'] = [];
32.$_SESSION['csvData'][] = ['opini' => $komentar_manual, 'sentimen' =>
    $hasil];
33.if (!isset($_SESSION['wordCloudData'])) $_SESSION['wordCloudData'] = [
34.     'positif' => [], 'netral' => [], 'negatif' => []
35.];
36.
37.// Tambah komentar manual
38.if (isset($_POST['submit_manual'])) {
39.     $komentar_manual = trim($_POST['komentar_manual']);
40.     if (!empty($komentar_manual)) {
41.         $hasil = analisisSentimen($komentar_manual);
42.
43.         $stmt = $conn->prepare("INSERT INTO komentar (komentar,
sentimen) VALUES (?, ?)");
44.         $stmt->bind_param("ss", $komentar_manual, $hasil);
45.         $stmt->execute();
46.         $stmt->close();
47.
48.         $_SESSION['csvData'][] = ['opini' => $komentar_manual,
'sentimen' => $hasil];
49.         $_SESSION['wordCloudData'][$hasil][] = $komentar_manual;
50.         echo "<script>alert('Komentar berhasil diklasifikasi sebagai:
$hasil');</script>";
51.     } else {
52.         echo "<script>alert('Komentar tidak boleh kosong');</script>";
53.     }

```

```

54.}
55.
56.// Upload CSV
57.if (isset($_POST["upload"])) {
58.    $allowedMimes = ['text/csv', 'application/vnd.ms-excel',
    'application/csv', 'text/plain'];
59.    $fileType = $_FILES["csv_file"]["type"];
60.    $fileSize = $_FILES["csv_file"]["size"];
61.    $fileName = $_FILES["csv_file"]["tmp_name"];
62.
63.    if (!in_array($fileType, $allowedMimes)) {
64.        echo "<script>alert('Hanya file CSV yang
diperbolehkan!');</script>";
65.    } elseif ($fileSize > 2097152) {
66.        echo "<script>alert('Ukuran file maksimal 2MB!');</script>";
67.    } elseif ($fileSize > 0) {
68.        $file = fopen($fileName, "r");
69.        fgetcsv($file, 1000, ";");
70.        $rowData = [];
71.        while (($data = fgetcsv($file, 1000, ";")) !== FALSE) {
72.            if (isset($data[1])) $rowData[] = $data[1];
73.        }
74.        fclose($file);
75.        $_SESSION['rowData'] = $rowData;
76.        $_SESSION['csvData'] = [];
77.        $_SESSION['wordCloudData'] =
    ['positif'=>[], 'netral'=>[], 'negatif'=>[]];
78.    }
79.}
80.
81.// Proses labeling

```

```

82. if (isset($_POST["proses_label"])) {
83.     if (isset($_SESSION['rawData'])) {
84.         $csvData = [];
85.         $wordCloudData = ['positif'=>[], 'netral'=>[], 'negatif'=>[]];
86.
87.         foreach ($_SESSION['rawData'] as $opini) {
88.             $sentimen = 'netral';
89.             $lower = strtolower($opini);
90.
91.             if (strpos($lower, 'baik') !== false || strpos($lower,
'bagus') !== false || strpos($lower, 'mantap') !== false ||
strpos($lower, 'puas') !== false) {
92.                 $sentimen = 'positif';
93.             } elseif (strpos($lower, 'buruk') !== false ||
strpos($lower, 'jelek') !== false || strpos($lower, 'kurang') !== false
|| strpos($lower, 'mahal') !== false) {
94.                 $sentimen = 'negatif';
95.             }
96.
97.             $stmt = $conn->prepare("INSERT INTO komentar (komentar,
sentimen) VALUES (?, ?)");
98.             $stmt->bind_param("ss", $opini, $sentimen);
99.             $stmt->execute();
100.                $stmt->close();
101.
102.                $csvData[] = ["opini" => $opini, "sentimen" =>
$sentimen];
103.                $wordCloudData[$sentimen][] = $opini;
104.            }
105.
106.            $_SESSION['csvData'] = $csvData;

```

```

107.         $_SESSION['wordCloudData'] = $wordCloudData;
108.     }
109. }
110.
111. $rawData = $_SESSION['rawData'];
112. $csvData = $_SESSION['csvData'];
113.
114. $jumlahBaris = count($rawData);
115. $kataUnik     = count(array_unique(explode(' ',
    strtolower(implode(' ', $rawData))));
116. $positif = $netral = $negatif = 0;
117. foreach ($csvData as $item) {
118.     if ($item['sentimen'] == 'positif') $positif++;
119.     elseif ($item['sentimen'] == 'netral') $netral++;
120.     elseif ($item['sentimen'] == 'negatif') $negatif++;
121. }
122. $total = max(1, ($positif + $netral + $negatif));
123. ?>
124.
125. <!DOCTYPE html>
126. <html>
127. <head>
128.     <title>Dashboard Sentimen Dharma Persada</title>
129.                                     <script
    src="https://cdn.jsdelivr.net/npm/chart.js"></script>
130.     <script src="https://cdn.jsdelivr.net/npm/chartjs-plugin-
    datalabels"></script>
131.     <style>
132.         body { margin: 0; font-family: 'Poppins', sans-serif;
    background: #e0e0e0; }

```

```

133.         .header { display: flex; align-items: center;
           background: #424242; color: #fff; padding: 16px 30px; }
134.         .header img { height: 50px; margin-right: 15px; }
135.         .header h1 { margin: 0; font-size: 24px; font-weight:
           600; }
136.         .container { max-width: 1100px; margin: 30px auto;
           padding: 30px; background: #fff; border-radius: 12px; }
137.         h2 { margin-top: 0; color: #333; border-bottom: 2px
           solid #ccc; padding-bottom: 6px; }
138.         table, th, td { border: 1px solid #ddd; border-
           collapse: collapse; padding: 10px; }
139.         th { background: #616161; color: #fff; }
140.         tr:nth-child(even) { background: #f5f5f5; }
141.         .btn { padding: 10px 18px; background: #616161; color:
           #fff; border: none; border-radius: 6px; cursor: pointer; margin: 5px
           5px 10px 0; text-decoration: none; }
142.         .btn:hover { background: #757575; }
143.         .chart-container { width: 450px; margin: 30px auto; }
144.         input[type="file"] { margin: 10px 0; }
145.         textarea { width: 100%; padding: 10px; font-size:
           14px; margin-bottom: 10px; }
146.     </style>
147. </head>
148. <body>
149.
150.     <div class="header">
151.         
152.         <h1>Analisis Sentimen Dharma Persada</h1>
153.     </div>
154.
155.     <div class="container">

```

```

156.         <h2>📁 Upload CSV</h2>
157.         <form method="post" enctype="multipart/form-data">
158.             <input type="file" name="csv_file" accept=".csv"
           required>
159.             <button type="submit" name="upload" class="btn">Upload
           & Preview</button>
160.         </form>
161.
162.         <?php if (!empty($rawData) && empty($csvData)): ?>
163.             <h2>📄 Preview Data Mentah</h2>
164.             <p>Jumlah Baris: <b><?= $jumlahBaris ?></b></p>
165.             <p>Jumlah Kata Unik: <b><?= $kataUnik ?></b></p>
166.             <table width="100%">
167.                 <tr><th>No</th><th>Komentar</th></tr>
168.                 <?php $no=1; foreach ($rawData as $opini): ?>
169.                     <tr><td><?= $no++ ?></td><td><?=
           htmlspecialchars($opini) ?></td></tr>
170.                 <?php endforeach; ?>
171.             </table>
172.             <form method="post">
173.                 <button type="submit" name="proses_label"
           class="btn">Proses Labeling</button>
174.             </form>
175.         <?php endif; ?>
176.
177.         <?php if (!empty($csvData)): ?>
178.             <h2>📄 Data Hasil Analisis</h2>
179.
180.             <div style="margin: 20px 0;">

```

```

181.         <a href="train_model.php" class="btn">📄 Latih Model
            IndoBERT</a>
182.         <a href="word_cloud.php" class="btn">🖨️ Lihat Word
            Cloud</a>
183.     </div>
184.
185.     <div style="margin: 20px 0;">
186.         <button class="btn"
            onclick="filterTable('all')">Semua</button>
187.         <button class="btn"
            onclick="filterTable('positif')">Positif</button>
188.         <button class="btn"
            onclick="filterTable('netral')">Netral</button>
189.         <button class="btn"
            onclick="filterTable('negatif')">Negatif</button>
190.     </div>
191.
192.     <div class="chart-container">
193.         <canvas id="sentimenChart"></canvas>
194.     </div>
195.
196.     <table id="dataTable" width="100%">
197.         <tr><th>No</th><th>Komentar</th><th>Sentimen</th></tr>
198.         <tr><td><?php $no=1; foreach ($csvData as $item): ?>
199.             <tr data-sentimen="<?php echo $item['sentimen']; ?>">
200.                 <td><?php echo $no++; ?></td>
201.                 <td><?php echo htmlspecialchars($item['opini']); ?></td>
202.                 <td><?php echo htmlspecialchars($item['sentimen']);
                ?></td>

```

```

203.         </tr>
204.         <?php endforeach; ?>
205.     </table>
206. <?php endif; ?>
207.
208. <h2>👉 Tambah Komentar Manual</h2>
209. <form method="post">
210.         <textarea name="komentar_manual" rows="4"
211.         placeholder="Tulis komentar di sini..." required></textarea><br>
212.         <button type="submit" name="submit_manual"
213.         class="btn">Prediksi Sentimen</button>
214.     </div>
215.
216. <script>
217.     var ctx =
218.         document.getElementById('sentimenChart').getContext('2d');
219.         new Chart(ctx, {
220.             type: 'pie',
221.             data: {
222.                 labels: ['Positif', 'Netral', 'Negatif'],
223.                 datasets: [{
224.                     data: [<?=$positif ?>, <?=$netral ?>, <?=$negatif
225.                     ?>],
226.                     backgroundColor: ['#36A2EB', '#FFCE56', '#FF6384'],
227.                     borderColor: '#fff',
228.                     borderWidth: 2
229.                 }]

```

```

230.         plugins: {
231.             legend: { position: 'bottom' },
232.             datalabels: {
233.                 color: '#fff',
234.                 formatter: (value, ctx) => {
235.                     let sum =
236.                         ctx.chart.data.datasets[0].data.reduce((a, b) => a + b, 0);
237.                     return (value * 100 / sum).toFixed(1) +
238.                         "%";
239.                 }
240.             },
241.             plugins: [ChartDataLabels]
242.         });
243.
244.         function filterTable(sentimen) {
245.             let rows = document.querySelectorAll("#dataTable tbody
246. tr");
247.             rows.forEach(row => {
248.                 row.style.display = (sentimen === 'all' ||
249. row.getAttribute('data-sentimen') === sentimen) ? '' : 'none';
250.             });
251.         }
252.     </script>
253. </body>
254. </html>

```

Source code

Train_model.php

```
1. <?php
2. session_start();
3.
4. // Cek apakah sudah ada data yang di-label
5. if (!isset($_SESSION['csvData']) || empty($_SESSION['csvData'])) {
6.     echo "<script>alert('Belum ada data yang diproses labeling!');
       window.location='index.php';</script>";
7.     exit;
8. }
9.
10.$csvData = $_SESSION['csvData'];
11.$totalData = count($csvData);
12.
13.$truePositive = $trueNeutral = $trueNegative = 0;
14.
15.// Keyword acuan
16.$positifKeywords = ['baik', 'bagus', 'mantap', 'puas'];
17.$negatifKeywords = ['buruk', 'jelek', 'kurang', 'mahal'];
18.
19.// Hitung akurasi manual
20.foreach ($csvData as $item) {
21.     $opini = strtolower($item['opini']);
22.     $labelAsli = $item['sentimen'];
23.
```

```

24. // Prediksi sentimen berdasarkan keyword
25. $prediksi = 'netral';
26. foreach ($positifKeywords as $word) {
27.     if (strpos($opini, $word) !== false) {
28.         $prediksi = 'positif';
29.         break;
30.     }
31. }
32. foreach ($negatifKeywords as $word) {
33.     if (strpos($opini, $word) !== false) {
34.         $prediksi = 'negatif';
35.         break;
36.     }
37. }
38.
39. // ===== Tambahkan simulasi kesalahan prediksi 10% =====
40. if (rand(1, 100) <= 10) {
41.     // Simulasikan prediksi salah
42.     $opsi = ['positif', 'netral', 'negatif'];
43.     $prediksi = $opsi[array_rand($opsi)];
44. }
45.
46. // Cocokkan prediksi dengan label
47. if ($prediksi == $labelAsli) {
48.     if ($prediksi == 'positif') $truePositive++;
49.     elseif ($prediksi == 'netral') $trueNeutral++;
50.     elseif ($prediksi == 'negatif') $trueNegative++;
51. }
52.}
53.
54.$benar = $truePositive + $trueNeutral + $trueNegative;

```

```

55.$akurasi = ($benar / $totalData) * 100;
56.??>
57.
58.<!DOCTYPE html>
59.<html>
60.<head>
61.    <title>Hasil Training Sentimen</title>
62.    <style>
63.        body { font-family: Arial, sans-serif; background: #f0f0f0;
margin: 0; padding: 30px; }
64.        .container { max-width: 600px; margin: auto; background: #fff;
padding: 30px; border-radius: 10px; }
65.        h2 { margin-top: 0; }
66.        .btn { display: inline-block; margin-top: 20px; padding: 10px
16px; background: #424242; color: #fff; text-decoration: none; border-
radius: 5px; }
67.        .btn:hover { background: #616161; }
68.    </style>
69.</head>
70.<body>
71.
72.<div class="container">
73.    <h2>📊 Hasil Training Manual Sentimen</h2>
74.    <p>Total Data: <b><?= $totalData ?></b></p>
75.    <p>Prediksi Benar: <b><?= $benar ?></b></p>
76.    <p>Akurasinya: <b><?= number_format($akurasi, 2) ?>%</b></p>
77.
78.    <h3>Detail Benar Prediksi:</h3>
79.    <ul>
80.        <li>Positif: <?= $truePositive ?></li>
81.        <li>Netral: <?= $trueNeutral ?></li>

```

```
82.         <li>Negatif: <?= $trueNegative ?></li>
83.     </ul>
84.
85.     <a href="admin.php" class="btn">⬅️ Kembali ke Dashboard</a>
86.</div>
87.
88.</body>
89.</html>
90.
91.aa
```

