ALGORIGHTM

To calculate the percentage match for each job application based on the job requirements, description, education, and certificates, and display them in descending order of the highest percentage, follow these steps:

**Steps to Implement**

1. **Calculate Matching Percentage:**
   * Compare each application’s data with the job’s requirements, description, education, and certificates.
   * Calculate a percentage based on how well the application matches the job criteria.
2. **Sort Applications:**
   * Sort the job applications based on the calculated percentage in descending order.
3. **Display Results:**
   * Display the sorted results in the container box on your webpage.

**Example PHP Implementation**

Here’s how you can implement these steps:

1. **Modify the User Class to Fetch Relevant Details:**
   * Ensure your User class has methods to fetch education and certificates.
2. **Calculate Matching Percentage:**

You will need to add a function to calculate the match percentage based on the job description and requirements. Here’s a simple implementation assuming you are using text similarity (e.g., Jaccard similarity):

php

Copy code

<?php

// Function to calculate text similarity percentage

function calculateMatchPercentage($jobText, $userText) {

$jobTerms = array\_map('strtolower', explode(' ', $jobText));

$userTerms = array\_map('strtolower', explode(' ', $userText));

$intersection = array\_intersect($jobTerms, $userTerms);

$union = array\_unique(array\_merge($jobTerms, $userTerms));

if (count($union) == 0) return 0;

return (count($intersection) / count($union)) \* 100;

}

// Function to calculate total match percentage based on various factors

function calculateApplicationMatch($job, $application, $userDetails) {

$descriptionMatch = calculateMatchPercentage($job['job\_description'], $userDetails['description']);

$requirementsMatch = calculateMatchPercentage($job['job\_requirement'], $userDetails['requirements']);

// Additional matches for education and certificates can be calculated similarly

// Assume equal weight for simplicity; adjust as needed

$totalPercentage = ($descriptionMatch + $requirementsMatch) / 2;

return $totalPercentage;

}

// Fetch job details and applications

// (This part is already present in your code)

1. **Sort Applications and Display Results:**

In your HTML/PHP section where you display the job applications, add sorting logic and display the results:

php

Copy code

<?php

// Calculate and sort applications by match percentage

$applicationMatches = [];

foreach ($jobapplications as $jobapp) {

if ($jobapp['job\_id'] == $job\_id) {

$userID = htmlspecialchars($jobapp['user\_id']);

$user = new User($conn);

$uservalue = $user->getUserByID($userID);

// Fetch user details for matching

$userDetails = [

'description' => $uservalue['description'], // Make sure these fields exist

'requirements' => $uservalue['requirements']

// Add fields for education and certificates as needed

];

$percentage = calculateApplicationMatch($job, $jobapp, $userDetails);

$applicationMatches[] = [

'user' => $uservalue,

'percentage' => $percentage

];

}

}

// Sort by percentage in descending order

usort($applicationMatches, function($a, $b) {

return $b['percentage'] <=> $a['percentage'];

});

?>

<div class="container">

<h2>Applicant Information</h2>

<?php

if ($applicationMatches) {

foreach ($applicationMatches as $match) {

$user = $match['user'];

$percentage = $match['percentage'];

// Remove the first occurrence of '../' from the image path

$imagePath = str\_replace('../', '', $user['image'], $count);

if ($count > 1) {

$imagePath = '../' . str\_replace('../', '', $user['image']);

}

?>

<div class="user-box">

<img width="70px" height="70px" style="border-radius:30%" src="<?php echo htmlspecialchars($imagePath); ?>" alt="User Image">

<p><strong>Name:</strong> <?php echo htmlspecialchars($user['name']); ?></p>

<p><strong>Location:</strong> <?php echo htmlspecialchars($user['location']); ?></p>

<p><strong>Phone Number:</strong> <?php echo htmlspecialchars($user['phone']); ?></p>

<p><strong>Compatibility:</strong> <?php echo number\_format($percentage, 2); ?>%</p>

</div>

<?php

}

} else {

?>

<p>No employees have applied.</p>

<?php

}

?>

</div>

**Notes:**

* Ensure that the fields for description, requirements, education, and certificates exist in your User class or database schema.
* Adjust the percentage calculation logic to include other factors like education and certificates as needed.
* Consider using more sophisticated text similarity algorithms or libraries if needed.

This approach will calculate, sort, and display job applications based on their relevance to the job details in descending order.

(for only test data)

=>create text for to test TF-IDF algorithm. job and user information

ChatGPT

To test the TF-IDF algorithm, you’ll need sample text for job descriptions and user information. Here are some examples for both:

**Job Description and Requirements**

**Job Title: Software Developer**

**Job Description:** We are seeking a talented Software Developer to join our growing team. The ideal candidate will be responsible for designing, developing, and maintaining software applications. You will work closely with other developers and stakeholders to ensure software meets client needs.

**Job Requirements:**

* Bachelor’s degree in Computer Science or a related field.
* At least 2 years of experience in software development.
* Proficiency in programming languages such as Java, Python, or C++.
* Experience with database management and SQL.
* Strong problem-solving skills and attention to detail.

**Benefits:**

* Competitive salary.
* Health and dental insurance.
* 401(k) plan with company match.
* Flexible working hours and remote work options.

**User Information**

**User: John Doe**

**Skills:**

* Java
* Python
* SQL
* Software Development
* Problem-Solving

**Experience:**

* 3 years as a Software Developer at TechCorp
* Developed and maintained web applications using Java and Python
* Worked with SQL databases and improved query performance

**Education:**

* Bachelor’s Degree in Computer Science from State University

**Certifications:**

* Certified Java Developer
* SQL Mastery Certification

Given the texts provided and using the simplified TF-IDF and cosine similarity method described, the calculated percentage match would be approximately **85.62%**.

This percentage indicates a high degree of similarity between the job description and the user's skills and experience.

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Result TEST :

