MentorEase mentoring software
AI-powered Matching for Mentoring

By Gil Katz, Director of Operations, MentorEase mentoring software (mentorease.com)

Managing a mentoring program can be a daunting task, especially trying to find the best possible mentor for each mentee across a diverse set of backgrounds and interests.

Mentoring software helps make matches by suggesting the best options, but so far the matching algorithm used in these software tools has been mostly based on selections in the registration forms.

Recent advances in Artificial Intelligence (AI) enables mentoring software tools to also read through open text fields and uploaded resumes or CVs. It identifies matching terms in the text and shows them in context for further analysis by the mentoring program manager.

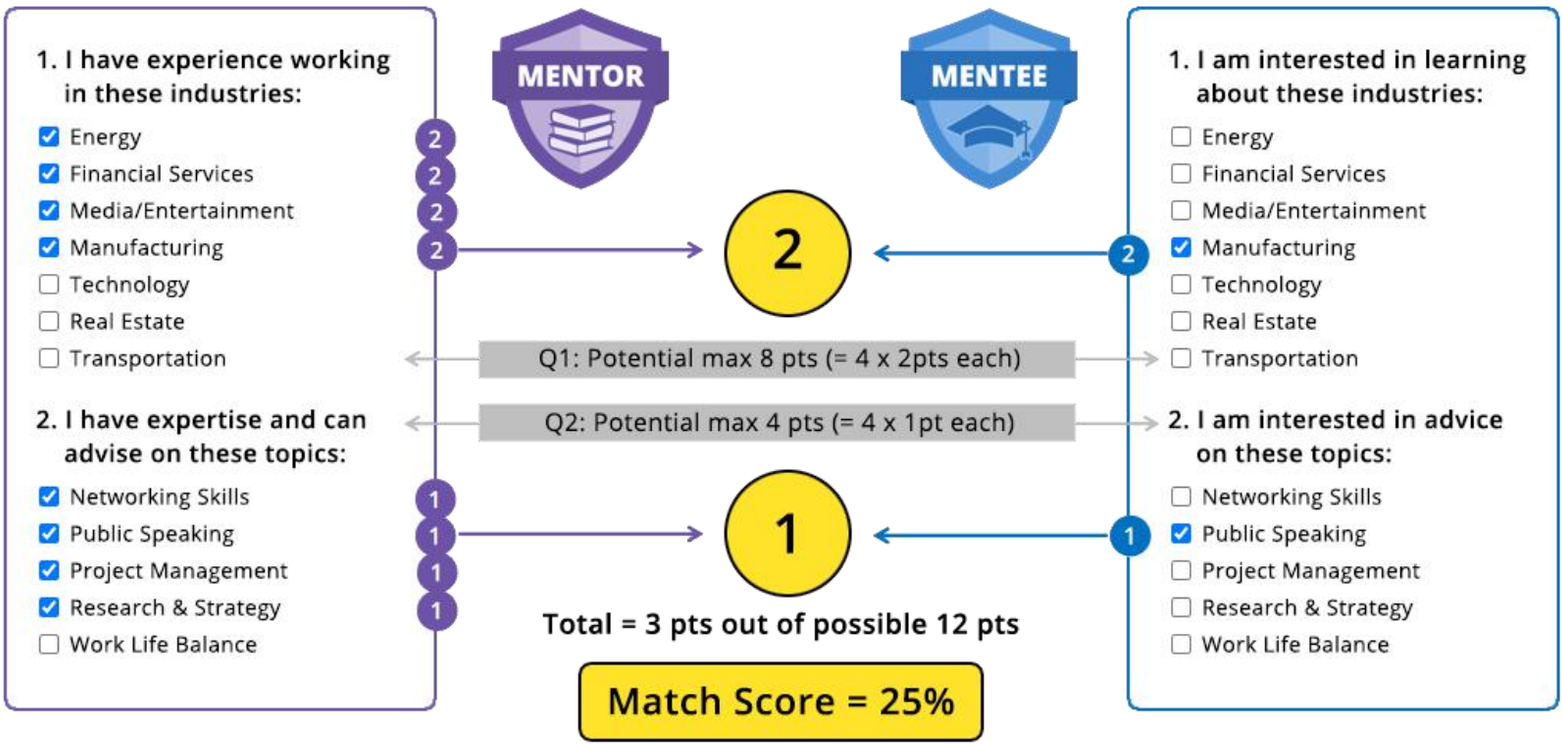
By combining both Selection-based matching and AI-based text matching, mentoring software tools can now provide a complete analysis of the participant profiles.

Selection-based Matching

This classic matching algorithm is defined by selecting which registration form questions should be used for matching, assigning a point system per question and adding the matched selections.

Each mentee's form selections are compared to each mentor's selections and a "% Match Score" is assigned to each potential match. Then potential mentors are displayed sorted by their match scores. Then a mentor can be picked from that list.

For example, in the diagram below Question #1 has been assigned 2 points for each selection and Question #2 has been assigned 1 point for each selection.



In Question #1 the mentor selected 4 checkboxes and the mentee only selected 1 that is the same. Of the possible 4 x 2 = 8 points they could have for this match, they only got 2 points. In the same manner Question #2 got 1 point. Adding them resulted in 3 points out of a total of 12 possible points, which is 3/12 = 0.25, a 25% Match Score.

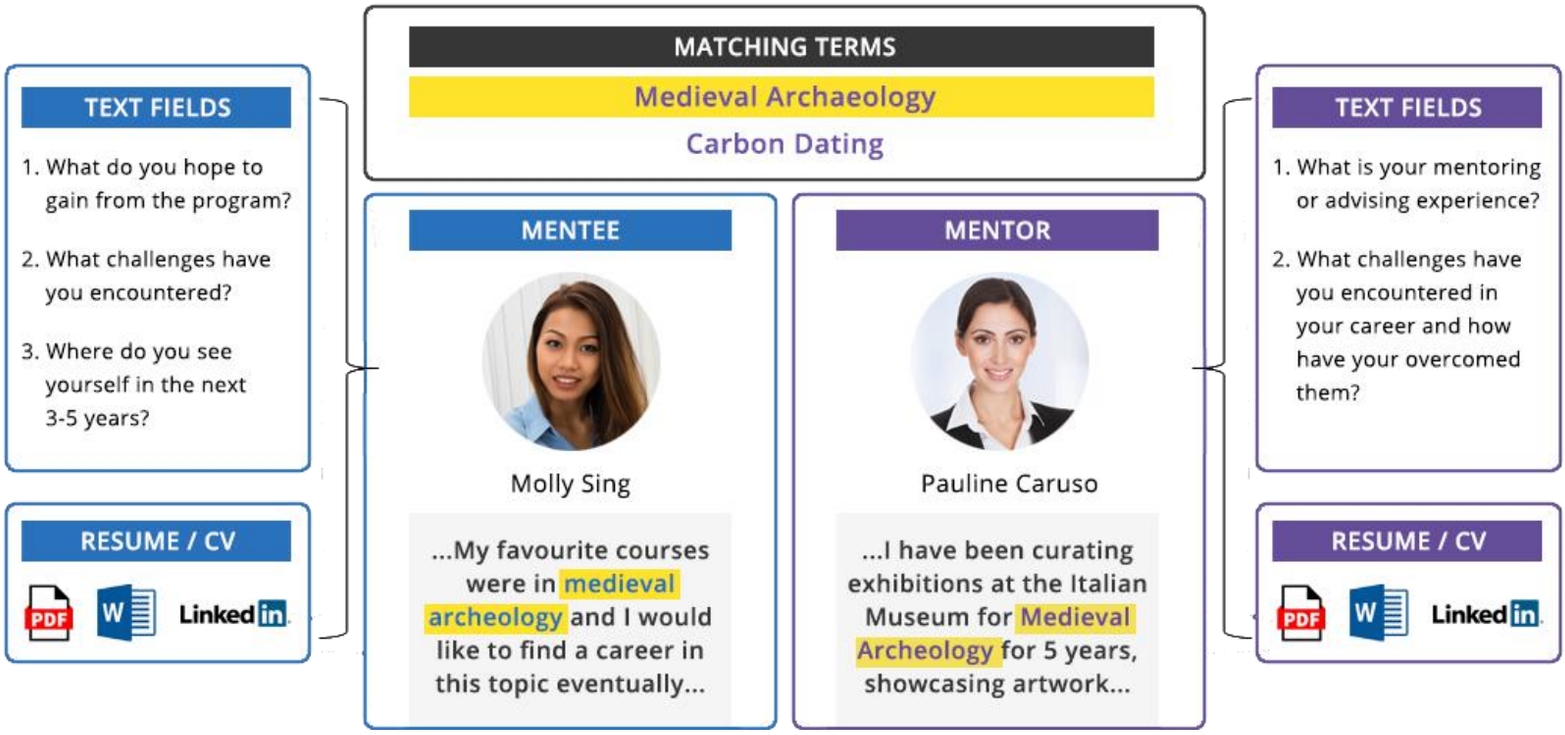
AI-based Text Matching

Mentoring program registration forms often have open text questions for personal bios, sharing what they are looking to learn, past experiences and more.

Using AI tools we can now compare text from these open text fields as well as uploaded resumes, CVs or Linkedin accounts of mentors and mentees. They can help identify hard-to-find, “needle in a haystack” type of information that mentees and mentors may have in common but would be impossible to find manually.

Since the average resume has about 500 words, comparing 100 mentor and mentee resumes requires comparing 50,000 words from mentees with 50,000 words from mentors which is very time consuming and practically impossible with today’s busy schedules. Instead, AI tools can read and compare such vast amounts of text, identify matching terms and display them in context for review.

In the example below the AI found the matching terms “Medieval Archeology” and “Carbon Dating” within the provided texts. Selecting ”Medieval Archeology” shows where each side mentioned it within sentences.

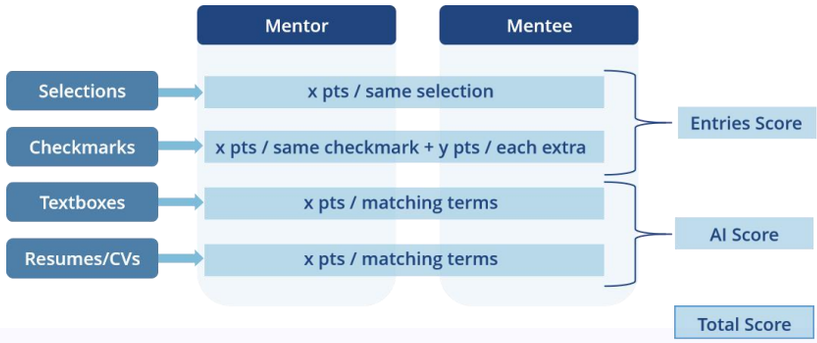


The mentee said *“...my favourite courses were in **medieval archeology** and I would like to find a career in this...”* while the mentor said *“... I have been curating exhibitions in the Italian Museum for **Medieval Archeology** for 5 years...”*.

They both have interest in this topic - this mentor could help this mentee - and there was no way of knowing about this shared interest without the AI text analysis tool !

It is important to note that AI does have limits and should only be used to find extra information for review by the mentoring program manager. Some times AI may find matching terms but when read in context they are found to not be relevant for making a better match.

Combining both Selection-based and AI-based text analysis, mentoring program managers can now make more meaningful connections between mentors and mentees to improve mentoring outcomes. The software can display for each potential match their combined selections (or “Entries Score”), the Text matching (or “AI Score”) and a combined “Total Score”. Filtering through these along with other categories provides a full situation summary and empowers them to make better matches.



Other Uses of AI for Mentoring

Beyond the matching process, AI can also help mentoring programs by:

* Suggesting potential topics of discussion or questions to ask each other

* Automatically summarize resumes or other texts to provide quick point form summaries for the mentor and mentee about each other to save time. This is especially useful for mentors who want to advice multiple mentees but are very busy and need any way to save time.

* AI could detect over time patterns in the mentoring programs to:
  * Suggest who are the best and worst mentors
  * Recommend specific mentors for mentees based on their past mentoring experience
  * Identify the most popular topics of interest found through all participants
    + % popularity per topic

”…and that’s how it works! As you can see,
AI is really not that complicated” :)