Sorting Algorithm for UniPool

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Table for sorting algorithm

CASE I: User has added an entry already

Parameter(i)	Weight(W)	Formula (f_i)
How close are their source locations?	100	$\frac{W}{Dist(Source_1 - Source_2) + 1}$
How close are their destination locations?	50	$\frac{W}{Dist(Dest_1 - Dest_2) + 1}$
When do they leave?	25	$\frac{W}{(Time_1 - Time_2) + 1}$
Year of Study (Phase II)	10	$\frac{W}{(Yr_1 - Yr_2) + 1}$

$\lambda = \Sigma\ f_i$

Each entry will have a separate λ w.r.t. the user's search keywords.

λ will be the argument to the sorting function.

The sorting function will sort according to decreasing values of λ

A filter function will exclude unimportant entries before sorting.

Updation

After the initial values are set, they can be tuned according to gradient descent using $\frac{1}{R}$ as the cost function, where R = satisfaction rating of the order of sorted entries.

CASE II: User has NOT added any entry

Present entries will get sorted on the basis of decreasing order of time of their creation.

After history feature is implemented, entries will also be sorted by the user's history of past pools with the given person.
So, if the user has travelled with Person A, but not Person B, A's entry will show up higher than B's.