

Perceived Task Similarities for Task Recommendation in Crowdsourcing Platforms

Survey documentation for WWW 2016' MSM workshop submission

1. Overall Survey Design

Previous work has shown, that workers on a micro-task market expect a recommender to provide similar tasks compared to their recently finished ones [1]. Task similarity is therefore to be seen as a crucial metric to design task recommender systems for crowdsourcing platforms. The survey shown on the following pages was conducted in order to gather data about how crowd workers perceive similarities between tasks. Further details about the data and the analysis can be found in [2].

The questionnaire provided to the workers consists of four parts shown in Figure 1. The first part is used to motivate the survey and introduce the idea of task recommendation. The main section in part three is framed by two pages asking for demographics, crowdsourcing experience and personal opinion on task recommendations. The third part holds the main interest with questions focusing on the opinion about task similarities.

To detect spammers, some questions in part two and four were used as consistency questions. We also introduced a test question in the main part of the questionnaire to detect any further spammers, but pointed out in our introduction that the questionnaire will contain such attentiveness checks.

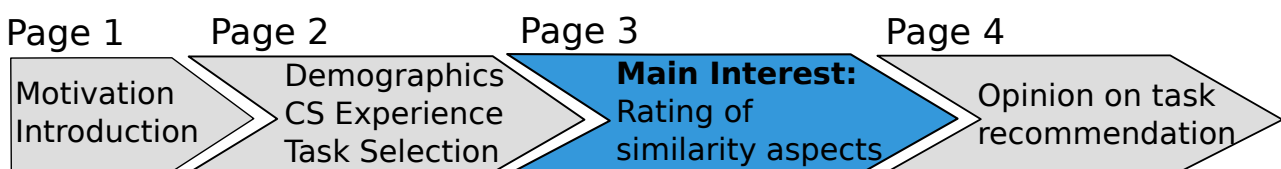
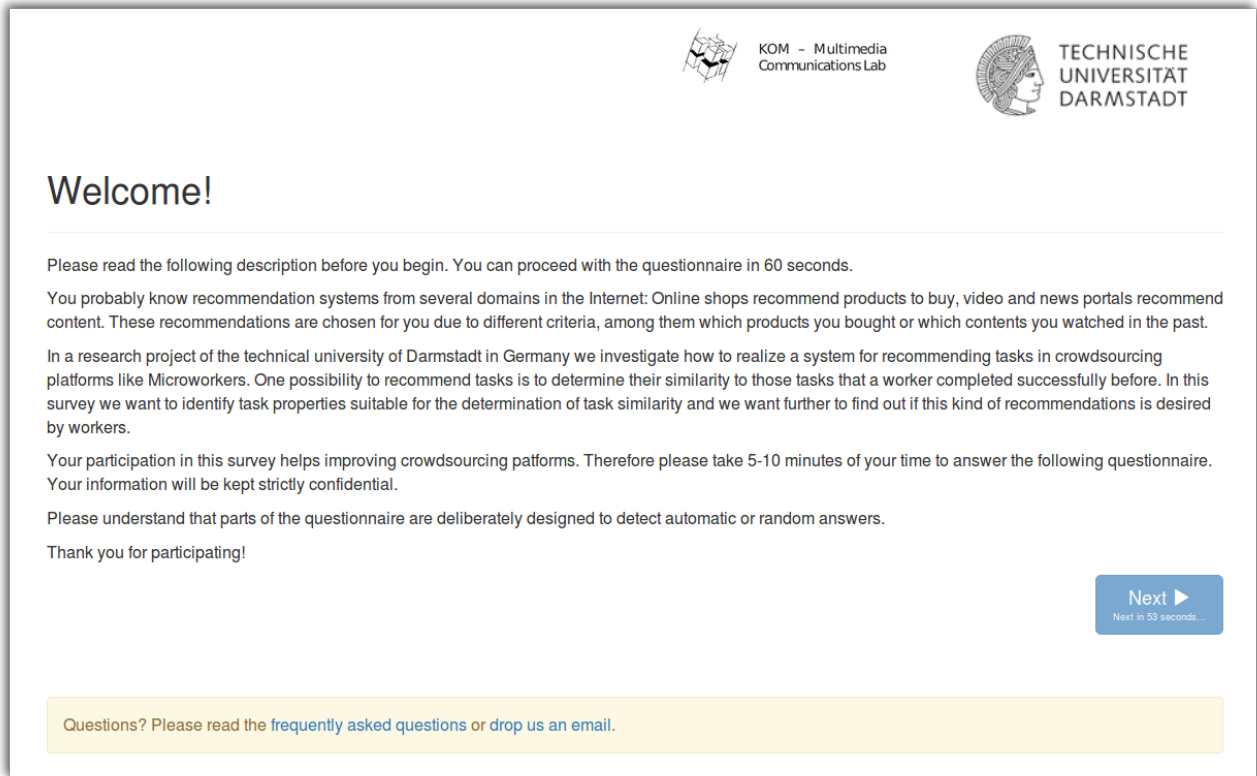


Figure 1: Overall survey design

2. Introduction

On the first page, shown in Figure 2, we motivate the idea of task recommendation and explain the necessity of the survey in order to have the workers understand our goals. We make sure that the workers take their time to read our introduction by not allowing them to move on for exactly one minute.



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Welcome!

Please read the following description before you begin. You can proceed with the questionnaire in 60 seconds.

You probably know recommendation systems from several domains in the Internet: Online shops recommend products to buy, video and news portals recommend content. These recommendations are chosen for you due to different criteria, among them which products you bought or which contents you watched in the past.

In a research project of the technical university of Darmstadt in Germany we investigate how to realize a system for recommending tasks in crowdsourcing platforms like Microworkers. One possibility to recommend tasks is to determine their similarity to those tasks that a worker completed successfully before. In this survey we want to identify task properties suitable for the determination of task similarity and we want further to find out if this kind of recommendations is desired by workers.

Your participation in this survey helps improving crowdsourcing platforms. Therefore please take 5-10 minutes of your time to answer the following questionnaire. Your information will be kept strictly confidential.

Please understand that parts of the questionnaire are deliberately designed to detect automatic or random answers.

Thank you for participating!

Next ▶
Next in 53 seconds...

Questions? Please read the [frequently asked questions](#) or [drop us an email](#).

Figure 2: Introduction

3. Demographics, Crowdsourcing Experience and Task Selection

The second page, shown in Figure 3, contains questions about the workers' demographic background, their experience within crowdsourcing platforms and their opinion on task selection. Some answers of the questions can be evaluated by comparing them with data from the platform provider. Others can be compared to redundant questions given on the last page of the survey. These answers can be used to identify spammers.

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Questions about your usage of crowdsourcing platforms

Please provide some information about your person:

Gender:

Age (in years):

Country of origin:

Country of residence:

Please provide some information of how you work with Microworkers or similar platforms:

How long have you been using Microworkers or similar platforms?

How many days per week do you work on Microworkers or similar platforms on average?

How many tasks do you accept on an average working day on Microworkers or similar platforms?

How many hours do you spend on an average working day on Microworkers or similar platforms?

How long do you search for a task before you accept it on average (in seconds)?

Do you think it is easy to find tasks that are interesting and enjoyable to work on? yes: no: prefer not to say:

If you have additional remarks you can enter them here:


[Next](#)


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Figure 3: Demographics, Crowdsourcing Experience, Task Selection

4. Main Interest: Rating of similarity aspects

The main part of the questionnaire, shown in Figure 4 and 5, holds 14 questions (+1 test question in the middle), following the same style. The workers are advised to assume they successfully completed a task A and have to determine the similarity of another task B. For each question a certain attribute of the task is pointed out and the workers have to judge the usefulness of the attribute towards determining the similarity. The workers answer by selecting from a likert scale with five options between "not useful at all" and "very useful".

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Questions about your conception of Task Similarity

Now imagine you already worked successfully on Task A and it shall be decided if Task B is similar to Task A. Please judge how useful the following aspects are for you personally to determine this similarity:

Task B comes from the same domain as Task A. not useful at all very useful
(Domains are for example: fashion, social networks, psychology, smartphone apps, videos.)

Task B demands the same action as Task A. not useful at all very useful
(A task's action refers to what you are requested to do, for example write, search, classify, translate, vote.)

Task B is as complex as Task A. not useful at all very useful
(Task complexity refers to the task's requirements for the worker.)

The description of Task B is as comprehensible as that of Task A. not useful at all very useful
(Comprehensibility refers to the extent or verbal quality of the task's description.)

Task B has the same purpose as Task A. not useful at all very useful
(A task's purpose refers to the utilization of its results, for example whether they are used commercially or scientifically.)

Task B has the same payment as Task A. not useful at all very useful
(The same payment means that you receive the same amount of money for both tasks.)

Task B takes the same time as Task A. not useful at all very useful
(The same time means that both tasks require the same working time (Time To Finish).)

Figure 4: Rating of similarity aspects (1)

Task B has the same payment/time ratio as Task A. not useful at all very useful
 (This means that for both tasks you receive the same amount of money per minute of your working time.)

Task B is completely jabber wocky to Task A. not useful at all very useful
 (This is an attentiveness check: Please select 'very useful' here.)

Task B has the same Time To Rate as Task A. not useful at all very useful
 (The Time To Rate refers to the number of days the employer needs to assess your work after you submit it.)

Task B has the same Success Rate as Task A. not useful at all very useful
 (The Success Rate refers to the percentage of tasks from this campaign the employer accepted so far.)

The campaign of Task B has the same number of open tasks as that of Task A. not useful at all very useful
 (This refers to the number of open tasks the campaign still offers for you to work on.)

The employer of Task B has the same experience on the platform as that of Task A. not useful at all very useful
 (The experience refers to the number of published tasks and the registration date of the employer.)

The employer of Task B comes from the same country as that of Task A. not useful at all very useful
 (This refers to the country the employer specified as country of residence during registration.)

The employer of Task B is of the same type as that of Task A. not useful at all very useful
 (Employer types are for example: commercial, scientific, non-profit, well-known.)

Can you think of other aspects which can be used to determine task similarity?

If you have additional remarks you can enter them here:



[Next](#) ▶

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Figure 5: Rating of similarity aspects (2)

5. Opinion on task recommendation

The last part of the questionnaire, shown in Figure 6, poses questions about the general acceptance of recommender systems for crowdsourcing platforms and asks for opinions about using task similarity.

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Further questions about your usage of crowdsourcing platform

To finish please answer the following questions about your opinion on task recommendation in crowdsourcing platforms like Microworkers:

How many tasks do you accept in an average week?

Would you like to receive task recommendations on the platform?

Yes No

Would you like to receive recommendations of tasks, which are similar to previously finished tasks (in the sense of those aspects you judged as being useful before)?

Yes No

Which other criteria (apart from or instead of similarity) should be considered for your recommendations?

If you have additional remarks you can enter them here:

Next ▶

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Figure 6: Opinion on task recommendation

References

[1] S. Schnitzer, C. Rensing, S. Schmidt, K. Borchert, M. Hirth, P. Tran-Gia - Demands on task recommendation in crowdsourcing platforms – the worker’s perspective, ACM RecSys 2015 CrowdRec Workshop, Vienna, 2015

[2] S. Schnitzer, S. Neitzel, S. Schmidt, C. Rensing - Perceived Task Similarities in Crowdsourcing Platforms, WWW 2016' MSM workshop – to be published