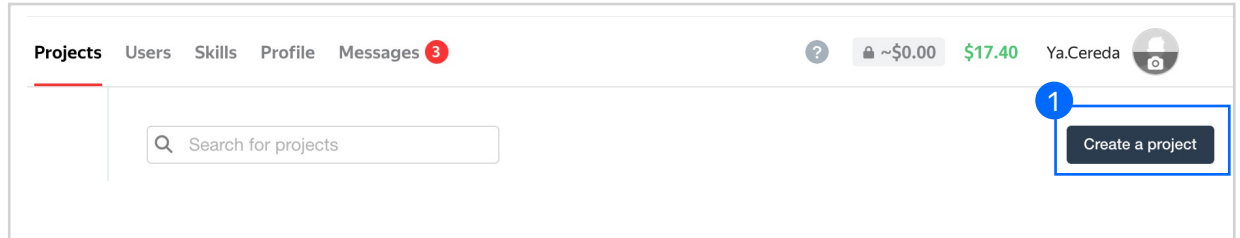




Text recognition manual

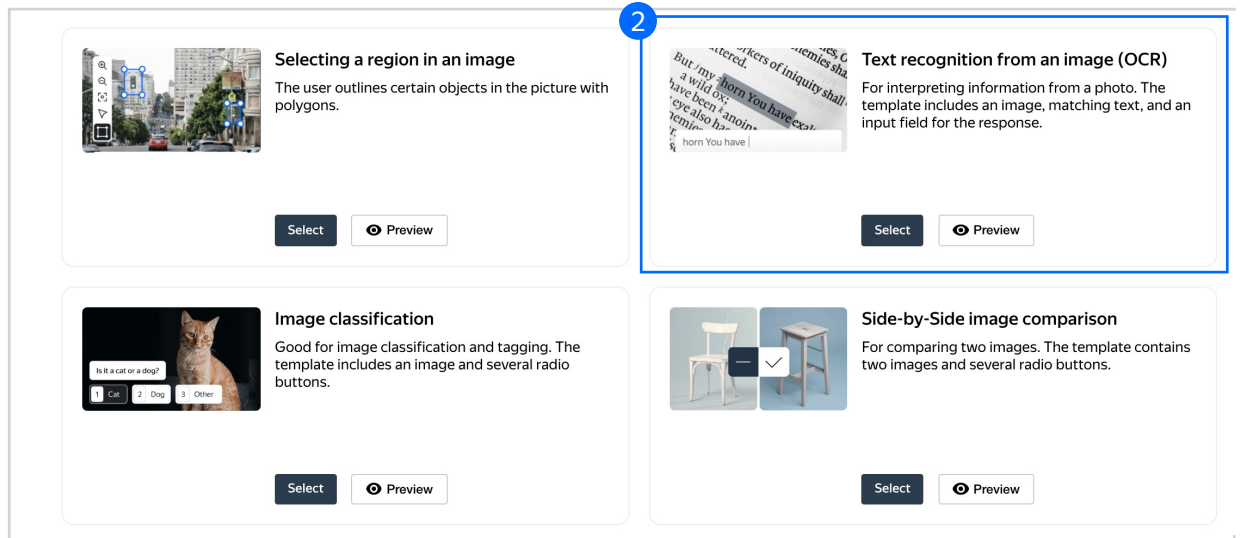
Create a project

1. Click **Create a project**.



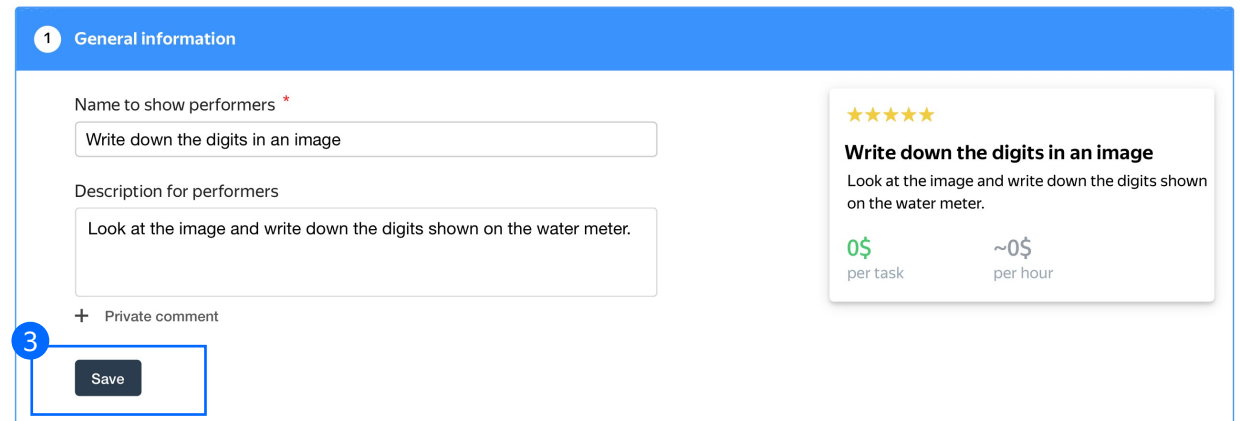
2. Choose the **Text recognition from an image** template.

Read about configuring the [task interface](#) in the Requester's Guide.



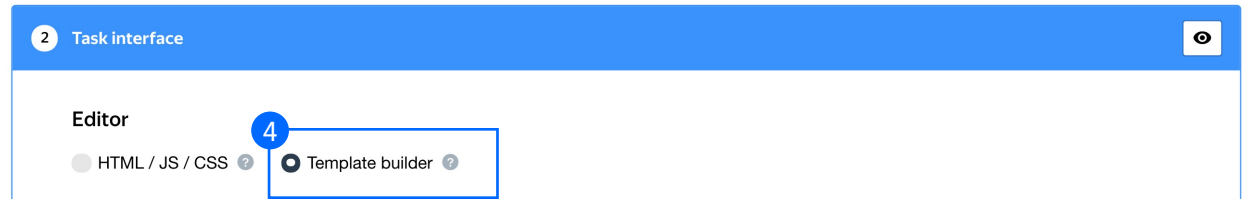
3. Enter a clear project name and description. Click **Save**.

Note: The project name and description will be visible to the performers.



4. Update the task interface in the **Template builder** block.

Read more about the [Template builder](#) in the Requester's Guide.

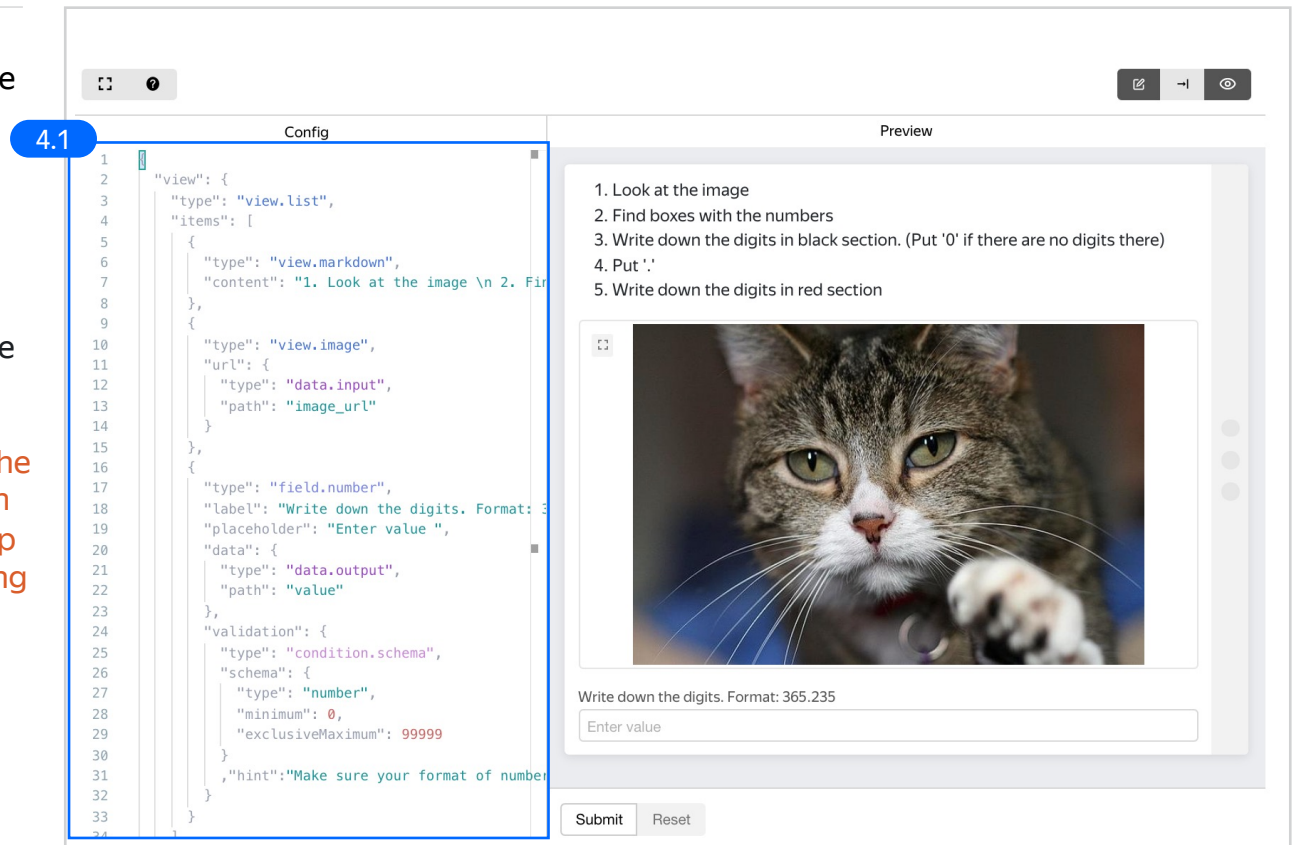


- 4.1. You can either update the existing config or delete it and paste the code provided at the end of this manual (in the appendix).

You can check what the template looks like and how it works in the preview section. For this task, we've added a short how-to in the interface itself.

Note: There is a validation check in the text field that ensures only digits can be written there. Checks like this help to improve the quality of data labeling along with quality control mechanisms.

Check the [Interfaces section](#) of our Knowledge Base for more tips on interface design.



4.2. Make sure the specifications look like this:

Note: Specifications are a description of input data that will be used in a project and the output data that will be collected from the performers.

Read more about [input and output data specifications](#) in the Requester's Guide.

Data specification ?

Input data

image_url (URL)

Output data

value (string)

Add field

Add field

Show common interface elements

4.2

Save

5. Write short and clear instructions.

Note: Though the task itself is simple, be sure to add examples for non-obvious cases (like when there are no red digits on an image). This helps to eliminate noise in the labels.

Click **Save**.

Get more tips on designing [instructions](#) in our Knowledge Base.

3 Instructions for performers

When a performer selects a task, they first see the instructions that you wrote. Describe what needs to be done and give examples. You can prepare your instructions in HTML format, then copy and paste them into the editor. Press < > to switch to HTML mode. To learn more, see the [documentation](#).

This task is to solve machine learning problem of digit recognition on the image. The more precise you read the information from the image the more precise would be algorithm Your contribution here is to get exact information even if there are any complicated and uncertain cases. We hope for your skills to solve one of the important science problem.

Basic steps:

- Look at the image and find meter with the numbers in the boxes
- Find black numbers/section and red numbers/section
- Put black and red numbers separated with '.' to text field

5

Save

6. Leave the **Translations** block as default and click **Save**.

4 Translations

i Performers from different countries will understand the purpose of the task better if it's in their own language. Translate the task name, description, and instructions into each language that you want performers to see. Otherwise, the language is inactive. If you want to translate the task interface, you have to create it using Template Builder.

Source language

—

Translations

Language	Name and description for performers	Instructions for performers	Task interface
✓ Source	✓	✓	✓

Add translation

6 Save

7. Click **Finish** to save the project.

New project

Back to the old interface Cancel **7 Finish**

- ✓ General information
- ✓ Task interface
- ✓ Instructions for performers
- ✓ Translations

Note: To edit project parameters, click the button in the list of projects or go to **Project actions** → **Edit** on the project page.

Write down the digits in an image — active

Project actions ^

Edit

Clone

Archive

Preview

Statistics for 7 days

Submitted tasks	Spent	Quality: control tasks	Quality: training tasks	Average submit time	Users	Banned users
0	0 \$	-	-	-	0	0

Create a training pool

1. Click on the **Training** tab and then click **Add training**.

Note: Training is an essential part of almost every crowdsourcing project. It allows you to select performers who have really mastered the task, and thus improve quality. Training is also a great tool for scaling your task because you can run it any time you need new performers.

Read more about [selecting performers](#) in our Knowledge Base.

Write down the digits in an image — active

Project actions v

Statistics for 7 days

Submitted tasks	Spent	Quality: control tasks	Quality: training tasks	Average submit time	Users	Banned users
0	0 \$	-	-	-	0	0

Pools Training Statistics Quality control

Active and closed Archived Filters Search

1 Add training

Pools can be archived manually or automatically (automatic archiving applies to pools with no activity for 30 days).

Title	Completed	Status	Started	To be completed
Add a pool to upload tasks, filter users, and set quality control rules.				

50 v

2. Use the existing project instructions.

Instructions

Use project instructions [?]

This task is to solve machine learning problem of digit recognition on the image.
The more precise you read the information from the image the more precise would be algorithm
Your contribution here is to get exact information even if there are any complicated and uncertain cases

3. Specify the training pool settings:

General settings

Training title

Price per task free training

Adult content No

Time per task suite seconds

Retry after days

Task assignment settings

Assign in order of uploading [?]

Shuffle on page [?]

Settings for passing training [?]

Full completion Yes

Required to pass

3.1

3.1. Click **Create training**.

Read more about [training pools](#) in our Requester's Guide.

4. Upload training tasks to the pool.
You can download a sample file with tasks [here](#):

Origin

This dataset, collected by Roman Kucev from TrainingData.ru, contains 1244 images of hot and cold water meters as well as their readings and coordinates of the displays showing those readings. Each image contains exactly one water meter. Toloka was used for photo capturing, segmentation, and recognizing the readings.

© Roman Kucev, under CC BY-NC 4.0

Note: It's important to include examples for all cases in the training. Make sure the training set is balanced and the comments explain why an answer is correct. Don't just name the correct answers.

File upload settings ?

Tasks per page

By empty row Set manually Smart mixing

Training tasks

[Show advanced settings](#)

Sample file for uploading tasks Close **Upload**

If the upload is successful, you will see the updated task counter.

Upload Files Delete Edit Preview

∞ task pages	10 training tasks
0 tasks	0 control tasks

5. Run the training pool.

Note: We recommend opening the training pool along with the main pool. Otherwise Tolokers will spend their time on training but get no access to real tasks, which is frustrating. Also, do not forget to close the training pools when there are no main tasks available anymore.

5

Text recognition training — closed

Statistics Download results Edit

Download the sample file, add your task data, and upload the file to the pool. The sample file uses TSV format, which is the same as CSV but using tab as the separator. Make sure you choose UTF-8 encoding when saving the file. [Learn more in the guide.](#)

[Template for general tasks.tsv](#)
[Template for control tasks.tsv](#)
[Template for training tasks.tsv](#)

Upload Files Delete Edit Preview

∞ task pages	10 training tasks
0 tasks	0 control tasks

0 Users who completed training

Create the main pool

1. Click **Add a pool**.

A pool is a set of paid tasks grouped into task pages. These tasks are sent out for completion at the same time.

Note: All tasks within a pool have the same settings (price, quality control, etc.)

Write down the digits in an image. — active

Project actions

Statistics for 7 days

Submitted tasks	Spent	Quality: control tasks	Quality: training tasks	Average submit time	Users	Banned users
0	0 \$	-	-	-	0	0

Pools Training Statistics Quality control

Active and closed Archived Filters Search

1 Add a pool

Pools can be archived manually or automatically (automatic archiving applies to pools with no activity for 30 days).

Title	Priority	Progress	Status	Started	To be completed
-------	----------	----------	--------	---------	-----------------

To launch a project, you first need to add a pool, set user filters and quality control rules, and upload tasks.

50

2. Give the pool any name you find suitable. You are the only one who will see it.

The description can be either public or private. Choose the option you prefer.

POOL NAME (VISIBLE ONLY TO YOU) ? ✕

Use project description

PUBLIC DESCRIPTION ?

Add a private description

3. Specify [pool parameters](#):

- 3.1. Select pool type. Choose **Other**.

Read more about [pool types](#) in the Requester's Guide.

POOL TYPE ? ^

TRAINING v

3.1 Other

Each task suite can have one or multiple tasks on the same page. Enter the total

- 3.2. Attach the training you created earlier and select the accuracy level that is required to reach the main pool.

Note: This means that Tolokers who get less than 75% accuracy will not see this pool.

3.2 TRAINING v

LEVEL REQUIRED, % ✕

3.3. Set the price per task suite (for example, \$0.02).

Note: To make a decision about pricing settings, try completing some tasks yourself and take note of how complicated they are and how much time you spend on them.

Read more about [pricing principles](#) in our Knowledge Base.

Price per task suite

Each task suite can have one or multiple tasks on the same page. Enter the total price for all tasks in the suite.

PRICE IN US DOLLARS ? 0.02

FEE ? 0.005

+ Dynamic pricing

3.4. [Filter](#) performers who can access the task. Choose “No” in the **Adult content** block. Click **Add filter** to choose the **Languages** and **Client** options in the list.

Performers [Copy settings from...](#)

Filter performers who can access the task.
Toloka has users from different countries, so don't forget to filter by language and region. [Learn more](#)

ADULT CONTENT ? No

3.4 Add filter Add skill

3.5. Choose **Languages = English** as your first filter. This way, performers who speak English will be invited to complete this task.

Then choose **Toloka web version** and **Toloka for mobile** clients.

These filters will make it possible for performers to complete your task on their computers or mobile devices.

PERFORMER PROFILE

3.5 Languages = English Performers who passed the language test

AND

CALCULATED DATA

Client = Toloka for mobile OR Client = Toloka web version

3.6. Set up [Quality control](#). Ban performers who give incorrect responses to control tasks. Click **+ Add Quality Control Rule**.

Note: Since tasks such as these have an answer that can be used as ground truth, we can use standard quality control rules like golden sets.

Read more about [quality control principles](#) in our Knowledge Base or check out [control tasks settings](#) in the Requester's Guide.

Quality control

Add rules to get more accurate responses.
All rules work independently.

NON-AUTOMATIC ACCEPTANCE No REVIEW PERIOD IN DAYS 14 CAPTCHA FREQUENCY

3.6 + Add Quality Control Rule

3.7. Click **Control tasks**. Set the number of responses and the percentage of correct responses.

CONTROL TASKS ?

Recent control task responses to use

3.7

If

and

then

+

3.8. Set up the up the [Fast responses rule](#).

This rule allows you to ban performers who submit tasks at a suspiciously high speed.

FAST RESPONSES ?

Recent task suites to use

Minimum time per task suite

3.8

If

then

+

3.9. Overlap. This is the number of users who will complete the same task.

Set an overlap of 3 to get a more confident final label.

To understand [how this rule works](#), go to the Requester's Guide.

Overlap

Specify how many performers you want to complete each task in the pool.

3.9

OVERLAP ? 3

DYNAMIC OVERLAP ? Off

3.10. Optionally, specify the percentage of top-rated performers in the [Speed / quality ratio](#).

Note: This can slow down pool completion.



Speed/quality balance

Set additional filters to restrict performer access based on their rating in Toloka. This boosts quality but may slow down project completion because there will be fewer performers available to complete tasks. [Learn more...](#)

Top % Online Time

Specify the percentage of top-rated active users who can access tasks in the pool.

3.10

8235  Speed 5764  Quality

All 90% 80% 70% 60% 50% 40% 30% 20% 10%

70% top-rated performers were selected.
The task is available to **5764** active users.

3.11. Specify the time given to complete a task suite (for example, 600 seconds)

To understand how much time it should take to complete a task suite, try doing it yourself.

3.11

Parameters

TIME PER TASK SUITE IN SECONDS ?	<input type="text" value="600"/>	POOL CLOSING DATE ?	<input type="text" value="2022-09-16"/>
KEEP TASK ORDER ?	<input type="checkbox"/> No	WAITING TIME FOR THE POOL TO CLOSE IN SECONDS ?	<input type="text" value="0"/>
		POOL PRIORITY WITHIN THE PROJECT ?	<input type="text" value="0"/>

4. Click **Save** to save Pool parameters.

Parameters

TIME PER TASK SUITE IN SECONDS ?	<input type="text" value="600"/>	POOL CLOSING DATE ?	<input type="text" value="2022-09-16"/>
KEEP TASK ORDER ?	<input type="checkbox"/> No	WAITING TIME FOR THE POOL TO CLOSE IN SECONDS ?	<input type="text" value="0"/>
		POOL PRIORITY WITHIN THE PROJECT ?	<input type="text" value="0"/>

Cancel

Prepare and upload a file with tasks

1. Prepare a TSV file with tasks as shown in our [example](#).
[Origin](#)

This dataset, collected by Roman Kucev from TrainingData.ru, contains 1244 images of hot and cold water meters as well as their readings and coordinates of the displays showing those readings. Each image contains exactly one water meter. Toloka was used for photo capturing, segmentation, and recognizing the readings.
© Roman Kucev, under CC BY-NC 4.0

2. [Upload pool tasks](#) from this file.

- 2.1. Select [Smart mixing](#) in **File upload settings** and specify the number of tasks of each type per page. Click **Upload**.

Note: We recommend putting as many tasks on one page as a performer can complete in 1 to 5 minutes. That way, performers are less likely to get tired, and they won't lose a significant amount of data if a technical issue occurs.

To learn more about [grouping tasks](#) into suites, read the Requester's Guide.

Note: If you changed the name of the input field, change it in the file as well.

Write down the digits in an image. — closed

Statistics Download results Edit

Download the sample file, add your task data, and upload the file to the pool. The sample file uses TSV format, which is the same as CSV but using tab as the separator. Make sure you choose UTF-8 encoding when saving the file. [Learn more in the guide.](#)

- Template for general tasks.tsv
- Template for control tasks.tsv
- Template for training tasks.tsv

2 Upload

0 task pages	0 training tasks
0 tasks	0 control tasks

0% Completed 0

File upload settings

Tasks per page

- By empty row
- Set manually
- Smart mixing

Main tasks 3

Training tasks 0

Control tasks 1

[Show advanced settings](#)

Sample file for uploading tasks

2.1 Close Upload

3. [Create control tasks.](#)

Click **Edit** → **Create control tasks.**

Write down the digits in an image — closed

Statistics Download results Edit

Download the sample file, add your task data, and upload the file to the pool. The sample file uses TSV format, which is the same as CSV but using tab as the separator. Make sure you choose UTF-8 encoding when saving the file. [Learn more in the guide.](#)

[Template for general tasks.tsv](#)
[Template for control tasks.tsv](#)
[Template for training tasks.tsv](#)

Upload Files Delete Edit

0 task pages 100 tasks 0 training tasks 0 control tasks

0% Completed 0

Note: Control tasks are tasks that already contain the correct response. They are used for checking the quality of responses from performers. The performer's response is compared to the response you provided. If they match, it means the performer answered correctly.

Projects > Write down the digits in an image > Write down the digits in an image > Uploaded tasks

Edit tasks

Use main tasks as a starting point to create control tasks or training tasks. Control tasks are for checking the quality of responses from performers. They contain correct responses to compare with actual responses. Training tasks are for teaching performers how to complete tasks. They contain correct responses and hints. [Learn more](#)

Main 100 Control tasks 0 Training tasks 0

Create control tasks Create training tasks Download

ID	Overlap	Responses from performers	Last updated
...8aa51eb3	3	0	09/17/2021 10:53:27 AM
...8aa51eb9	3	0	09/17/2021 10:53:27 AM

3.1. Enter correct responses to your control tasks. Check the **value** output field, which compares the user's response to the control task. Look at the query, select the response, click **Save and go to next**. Repeat until you have ~20 control tasks.

Note: In small pools, control tasks should account for 10% of all tasks.

To learn more about [creating control tasks](#), go to the Requester's Guide.

Projects > Write down the digits in an I... > Write down the digits in an I... > Uploaded tasks > Edit tasks

Create control task

1. Enter correct responses

2. Select the fields to use

<input checked="" type="checkbox"/>	Field	Value
<input checked="" type="checkbox"/>	value	267.619


1. Look at the image

2. Find boxes with the numbers

3. Write down the digits in black section. (Put '0' if there are no digits there)

4. Put '.'

5. Write down the digits in red section



Write down the digits. Format: 365.235

267.619

1 / 1

3.1

Save and go to next

3.2. To check the number of control tasks, go to the **Pool** page.

Note: You can prepare control tasks not only in the interface. You can collect them outside Toloka and upload a [task set](#) with golden answers.

Origin

This dataset, collected by Roman Kucev from TrainingData.ru, contains 1244 images of hot and cold water meters as well as their readings and coordinates of the displays showing those readings. Each image contains exactly one water meter. Toloka was used for photo capturing, segmentation, and recognizing the readings. © Roman Kucev, under CC BY-NC 4.0

4. Preview the pool.

Note: Remember that the tasks will be completed by actual Tolokers. Double check that everything is correct with your project configuration.

A screenshot of the Toloka interface showing task statistics. At the top, there are buttons for 'Upload', 'Files', 'Delete', 'Edit', and 'Preview'. Below these are four summary boxes: '~90 task pages', '0 training tasks', '90 tasks', and '10 control tasks'.

A screenshot of the Toloka interface showing a preview of tasks. The interface is divided into four quadrants, each displaying a task card. Each card includes a list of instructions (1-5) and a small image of a water meter. The instructions are: 1. Look at the image, 2. Find boxes with the numbers, 3. Write down the digits in black section. (Put '0' if there are no digits there), 4. Put ':', 5. Write down the digits in red section. Below each image is a text input field with the prompt 'Write down the digits. Format: 365.235' and an 'Enter value' button. The interface also shows a top navigation bar with 'Tasks', 'Active', and 'Messages' tabs, and a bottom bar with 'Exit', 'Skip', and 'Submit' buttons.

5. Start the pool.

Make sure you start the training pool before you start the main pool.

5 Write down the digits in an image — closed

Statistics Download results Edit

Download the sample file, add your task data, and upload the file to the pool. The sample file uses TSV format, which is the same as CSV but using tab as the separator. Make sure you choose UTF-8 encoding when saving the file. [Learn more in the guide.](#)

- Template for general tasks.tsv
- Template for control tasks.tsv
- Template for training tasks.tsv

Upload Files Delete Edit Preview

~90 task pages	0 training tasks
90 tasks	10 control tasks

0 % Completed 0

0 -90

Receiving responses

1. Wait until the pool is completed. Refresh the pool page to check progress.
2. Click **Download results**.

Aggregate the results by using [Text Aggregation](#). You can [find the code in Toloka Crowd-Kit](#).

Write down the digits in an image — closed

Statistics **Download results** Edit

Download the sample file, add your task data, and upload the file to the pool. The sample file uses TSV format, which is the same as CSV but using tab as the separator. Make sure you choose UTF-8 encoding when saving the file. [Learn more in the guide.](#)

- Template for general tasks.tsv
- Template for control tasks.tsv
- Template for training tasks.tsv

Upload Files Edit Preview

90 task pages	0 training tasks
90 tasks	10 control tasks

100 %
Completed 90, accepted 90

View assignments

3. Make sure to uncheck **Separate assignments with empty row** and **Download the results**.

Download results

Status Active Submitted Accepted
 Rejected Skipped Expired

Columns URL task ID assignment ID
 Task suite ID Performer ID status
 start time submit time accept time
 reject time skip time expire time
 price

Download data for the period
 Separate assignments with empty row
 Exclude assignments by banned users

Close **Download results**

Appendix

Interface code

Step 4.1.

```
{
  "view": {
    "type": "view.list",
    "items": [
      {
        "type": "view.markdown",
        "content": "1. Look at the image \n 2. Find boxes with the numbers \n 3. Write down the digits in black section. (Put '0' if there are no digits there) \n 4. Put '.' \n 5. Write down the digits in red section\n"
      },
      {
        "type": "view.image",
        "rotatable": true,
        "url": {
          "type": "data.input",
          "path": "image_url"
        }
      },
      {
        "type": "field.text",
        "data": {
          "type": "data.output",
          "path": "value"
        },
        "label": "Write down the digits. Format: 365.235",
        "placeholder": "Enter value ",
        "validation": {
          "type": "condition.schema",
          "schema": {
            "type": "string",
            "pattern": "^\\d+\\.?\\d{0,3}$",
            "minLength": 1,
            "maxLength": 9
          },
          "hint": "Make sure your format of number is '365.235' or '0.112'"
        }
      }
    ]
  },
  "plugins": [
    {
      "type": "plugin.toloka",
      "layout": {
        "kind": "scroll",
        "taskWidth": 600
      }
    }
  ]
}
```