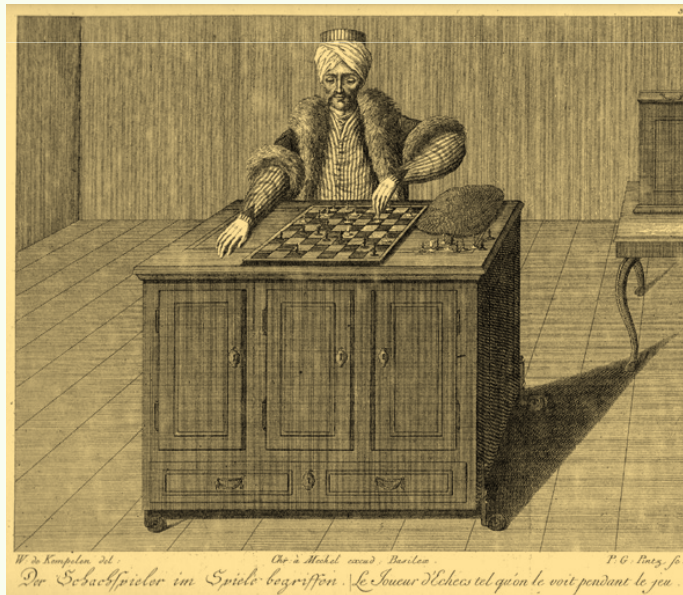


Harnessing the Power of Mechanical Turk: an Online Workforce

1

MAHMOUD EL-HAJ



What is Mechanical Turk (MTurk)

2

- Amazon Web Services
- A crowdsourcing marketplace that enables computer programs to co-ordinate the use of human intelligence to perform tasks which computers are unable to do!
- They call it the Mechanical Turk, after an 18th century hoax, a mannequin that appeared to play chess

MTurk Components

3

- HITs - *Human Intelligence Tasks* - are individual tasks that workers work on.
- *Requesters* - Human ask workers to complete HITs and get results using Mechanical Turk
- *Workers* (called *Providers* in Mechanical Turk's Terms of Service) can then browse among existing HITs and complete them for a monetary payment set by the Requester.

Benefits

4

As a Mechanical Turk Requester you:

- Have access to a global, on-demand, 24 x 7 workforce
- Get thousands of HITs completed in minutes
- Pay only when you're satisfied with the results

As a Mechanical Turk Worker you:

- Can work from home
- Choose your own work hours
- Get paid for doing good work

MTurk Common Misbelieves

5

- It is a virtual sweatshop
- Taking advantage of poor people in third world countries that are doing tedious tasks for pennies.
- Those misbelieves made people afraid that the results will be either of very poor quality, or they will not be representative of the actual U.S. population.
- While Instead, Mechanical Turk tends to be often a replacement for TV, or simple something to spend some free time and get some spare cash in reward.

MTurk Demographics 1

6

- A survey by (**Panos Ipeirotis**):
- Well, as you will see below the Turkers are a pretty representative sample of the online population

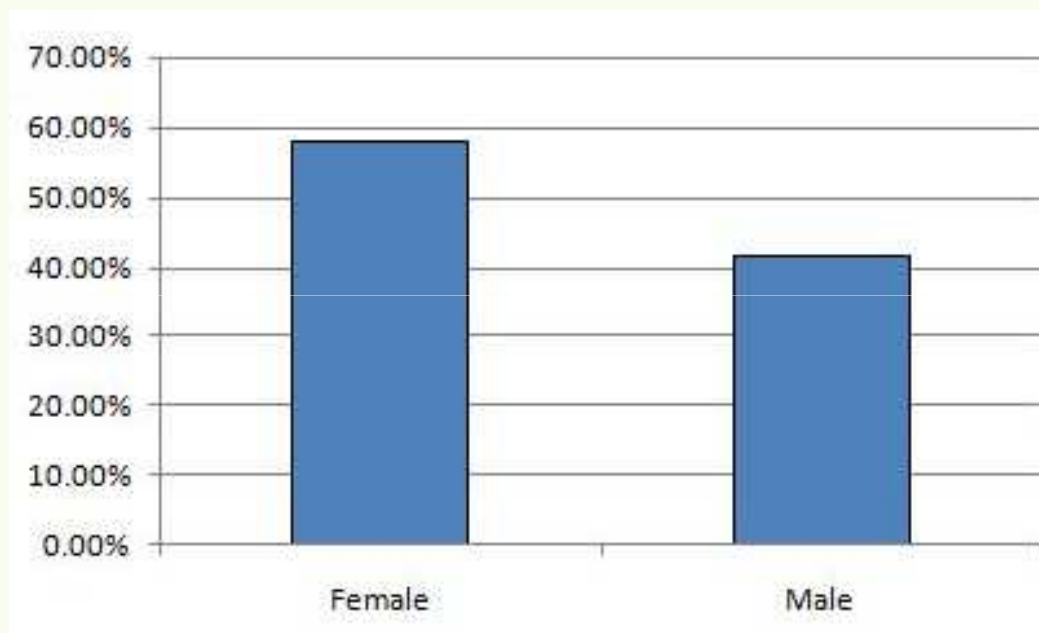
Country Breakdown	
United States	76.25%
India	8.03%
United Kingdom	3.34%
Canada	2.34%
Others	10.04%

Most participants are coming from the US and not from a third world country, this is due to the fact that in order to get paid, someone has to have a US bank account,

MTurk Demographics 2

7

- Gender breakdown

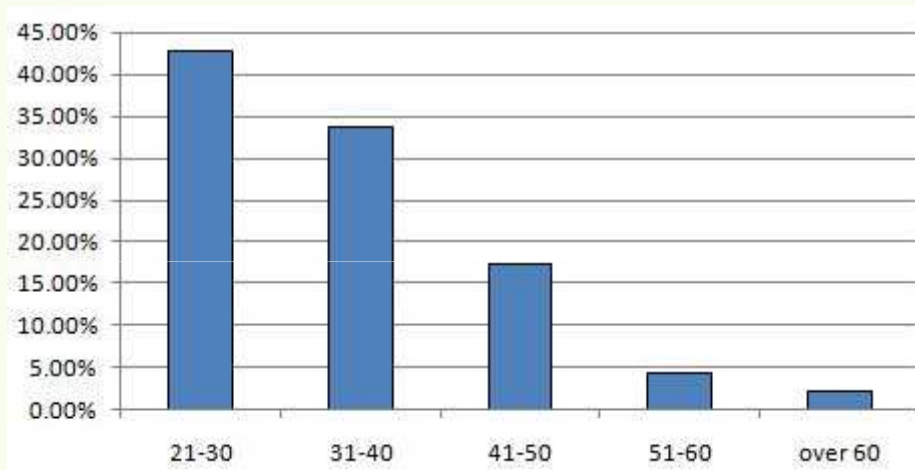


As you can see, there are slightly more females than males.

MTurk Demographics 3

8

- Age distribution

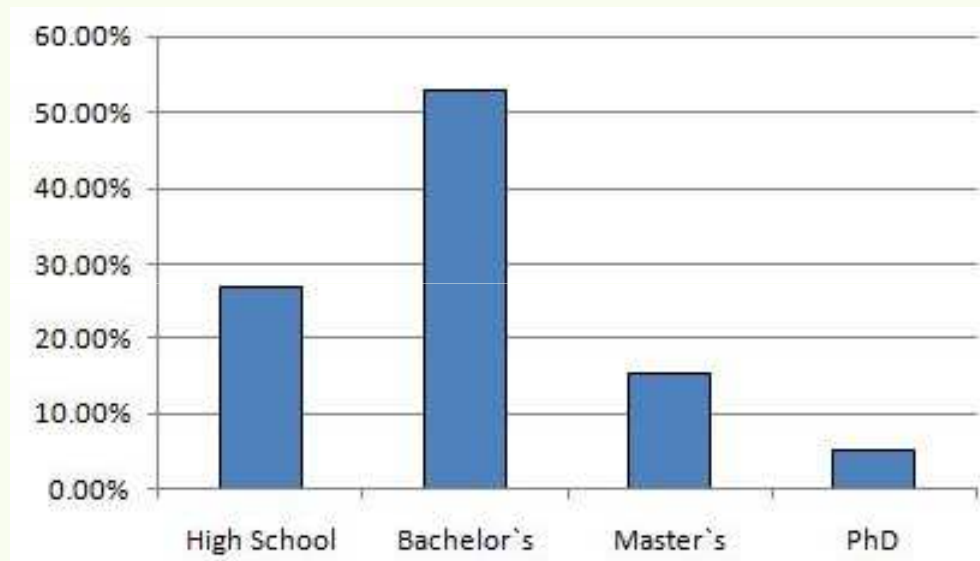


- Not surprisingly, many young people participate on Mechanical Turk, mainly as a way to get some extra cash

MTurk Demographics 4

9

- Education (Main factor)

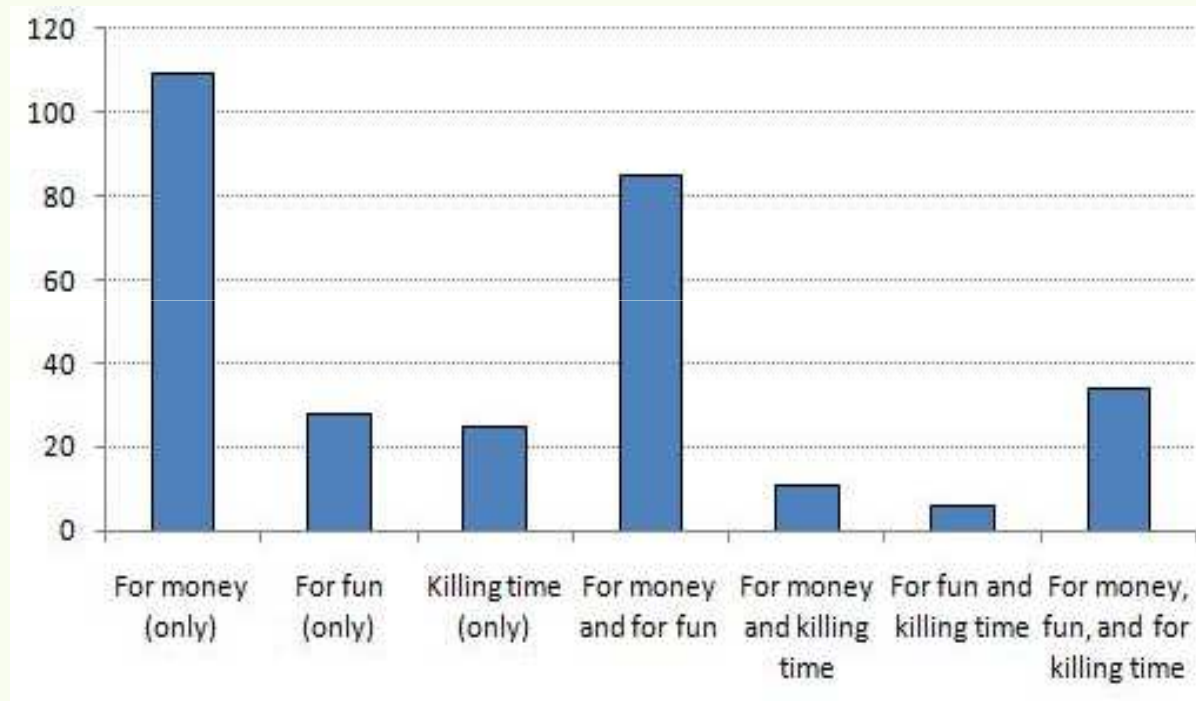


- Turkers are a pretty representative sample. Most of them have a college education, and some of them even have PhDs! In fact, the distribution seems pretty similar to the distribution for the overall US population.

MTurk Demographics

10

- Why people participate in Mechanical Turk?



- From the qualitative survey, you could see that most of the participants mention money, one way or another.

Using MTurk in our Research

11

- Using MTurk to create Arabic corpus of summaries:
- 150 Arabic articles (10 concepts)
- 5 summaries each
- \$0.10/HIT
- Turkers are asked to select the sentences that should be in the summary.
- Sentences should not exceed 50% of the total number.

Quality of the Results

12

- In the beginning it took 5 days to complete hits for 10 articles.
- Later, results of 30 articles in 1 to 2 day(s).
- Users should provide 1 to 3 keywords to insure that they are reading the article.
- Turkers who doesn't follow the guidelines will have their work rejected.
- Contacting the worker.
- Comments by the workers

Questions arise

13

- Are the workers Arabic native speakers?
- Do they actually read?
- Should we make the hits easier (using checkboxes)?

Start using MTurk

14

As a Requester all you need is a US address and zip code.

As Worker, in addition to the address you need a valid US bank account.

Getting started:

www.mturk.com