

Amazon Mechanical Turk

Mechanical Turk

- Chess Automaton
- Even solved the knight's tour!
- Inventor Wolfgang von Kempelen
- First appeared in 1769 in Austria-Hungary
- Mechanical Turk passed on for 65 years before people figured out how it worked



Amazon Mechanical Turk

- Marketplace where people can hire other people to do small tasks that computers have a hard time doing.
- Human Intelligence Tasks (HITs)
- Tasks are assigned on a first come first serve basis
- Workers are considered independent contractors
- Widely used by academics and businesses for research purposes
- Pay can range from \$1 for 10 minutes to as low as \$0.01 per task

Extracting information from pictures and transcription made up almost two-thirds of Mechanical Turk requests

of HIT groups in each category during the week of Dec. 7-11, 2015

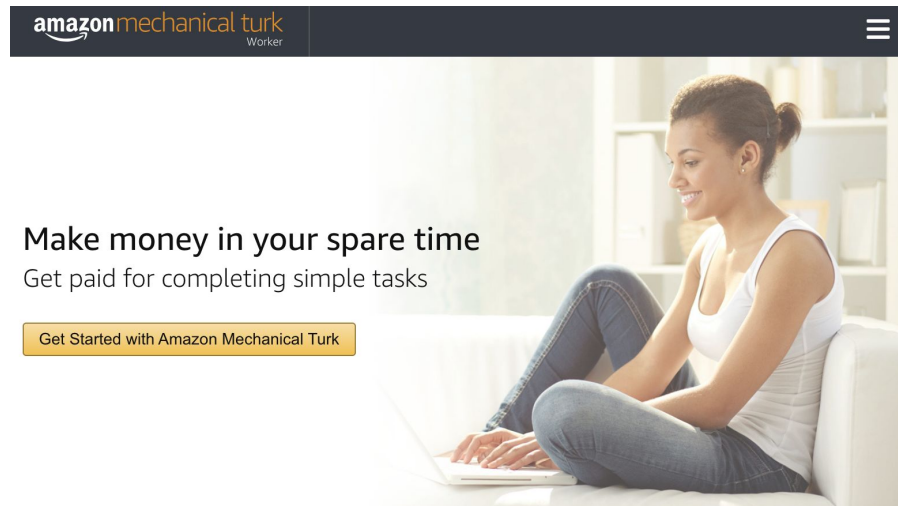
	# of HIT groups	% of total HIT groups
Collect info from pictures	787	37%
Transcription	562	26
Content classification or matching	274	13
Survey (academic or business)	269	13
Collect info from around the web	145	7
Provide keywords/titles for images	25	1
Website testing	18	1
Other	43	2

Source: Content analysis of tasks appearing on Mechanical Turk.
"Research in the Crowdsourcing Age, A Case Study"

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Pros

- You can work remotely
 - Remote towns may not have jobs readily available
- You can work to get preferential treatment for better HITs
- Free market set price → theoretically if demand for labor goes up, workers can expect better pay
- Same day payment
- Can meet bills if bill is small (a small grocery bill)
- Average requester pays \$11 per hour
- Flexible hours



Cons

Wages

- Most individual tasks pay 10 cents or less. Many tasks pay 1 cent.
- 53% of respondents to a 2016 Pew Research survey reported earning less than \$5/hr. Only 8% reported earning \$8 or more.
- Researchers in 2018 found that the median income was roughly \$2/hr and only 4% of studied workers earned more than \$7.25/hr
- While requesters claim an average pay of \$11/hr, much of time working is unpaid — searching for tasks, tasks which cannot be completed, tasks which are rejected.

Cons

Regulation

- Amazon takes little responsibility for regulating requesters
- Poor rating system for requesters makes it hard for workers to identify and avoid bad requesters
- Requesters can reject tasks for myriad reasons (including “funds not allocated”), but keep the work
- Little to no protections for wage theft, disputing rejected payment and other requester misconduct
- Tasks can contain disturbing language and imagery with little warning

Cons

Invisible Workers

- Workers completely anonymous and abstracted to requesters, making it easier to dismiss poor conditions
- Labels and research provided by crowd-sourcing can be of questionable quality. Reports of workers creating scripts to automate performing tasks, generating meaningless data.
- Amazon Mechanical Turk is ubiquitous in research and industry as an affordable way to collect data, with little to no acknowledgement of what collecting that data entails

What's Next?

- Workers have attempted to organize and raise awareness around wages and bad actors. turkopticon.net
- Workers have asked for better tools for avoid bad requesters, and better tools for communicating with requesters.
- Some researchers have drawn attention to problems with Amazon's service and advocate moving to alternative “microworking” platforms that guarantee minimum payment levels and more ethical relationships between workers and requesters.

Further Reading

- [The Atlantic: The Internet Is Enabling a New Kind of Poorly Paid Hell](#)
- [Pew Research Center: Research in the Crowdsourcing Age, a Case Study](#)
- [ACM: A Data-Driven Analysis of Workers' Earnings on Amazon Mechanical Turk](#)

Outline

- History of mechanical turk -jk
- Pew research/ overview
- Pros -jk
 - Atlantic article
 - Only job around
- Cons
 - Exploitive wages
 - Rejection rate
 - Time to find next HITs
 - Poor data for research
- Further Reading

Notes

<https://www.theatlantic.com/business/archive/2018/01/amazon-mechanical-turk/551192/>

- Mind numbing tasks online, pennies per job
 - 80 cents to read a review, answer survey (45 min)
 - \$1 to do certain tasks
- Crowdfunder, clickworker, toluna, amazon's mechanical turk
- Unregulated
- Account suspensions if negative speech
- Average \$5 an hour
- Only type of work certain people can find
- Free market set price
- Amazon takes 20% fee
- Some get preferential treatment
- Can get same day payment
- Get \$20 to pay grocery bill

- Time spent looking for tasks
- Independent contractors
- Should this be regulated
- Not covered by the Fair labor standards act i.e. Uber, AMT
- People are doing it for a living
- Money concentrating over time
- Grueling work for pennies similar to depression of 1938...
- Minimum wage?

What is an independent contractor?

- Free from supervision, direction, and control
- Has own business and pays for related fees
- Is free to refuse work

General lack of protection

Analysis paper <https://arxiv.org/pdf/1712.05796.pdf>

- Average and median hourly wages of workers on AMT are \$3.13/h and \$1.77/h respectively.
 - requesters post low-reward HITs
 - unpaid time spent searching for tasks, working on tasks that are rejected, and working on tasks that are not submitted.
- Returning HITs has the biggest impact to the hourly wage. The time lost due to the time between the HITs has the second most impact. Task rejection has the least impact in terms of unpaid work. Note, however, rejection could have potential risks of not being able to accept HITs in the future or getting banned from AMT
- High reward HITs yield a higher hourly wage. While they take longer to perform, they do not take so much longer as to eliminate the gains of the higher piece rate.
- HITs such as data/image transcription are low-paying whereas “video evaluation” HITs are high-paying.
- Raising workers’ awareness of their effective hourly wage, visualizer
- Helping workers to avoid unfair requesters is one way of dealing with this problem
- Workers cite poor communication with requesters as a major flaw in crowd work platform design

Gold mine or Coal mine

- AMT becoming a research platform
 - Low pay leading to automization of surveys
 - Poor data

Sources

<https://www.history.com/news/how-a-phony-18th-century-chess-robot-fooled-the-world>

<https://direct.mit.edu/coli/article/37/2/413/2101/Amazon-Mechanical-Turk-Gold-Mine-or-Coal-Mine>

<https://www.nytimes.com/interactive/2019/11/15/nyregion/amazon-mechanical-turk.html>