

# **NIPS 2010 Workshop Summary**

Jenn Wortman Vaughan, UCLA  
Hanna Wallach, UMass Amherst











Now that we've moved up in the world...

**NIPS 2010 Workshop:  
Computational Social Science  
and the Wisdom of Crowds!!!!!!**













**THE WISDOM OF CROWDS?????!!!**

# amazon mechanical turk

beta

## Artificial Intelligence

### Make Money by working on HITs

HITs - *Human Intelligence Tasks* - are individual tasks that you work on. [Find HITs now.](#)

#### As a Mechanical Turk Worker you:

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



### Get Results from Mechanical Turk Workers

Ask workers to complete HITs - *Human Intelligence Tasks* - and get results using Mechanical Turk. [Register Now](#)

#### 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



**We got mixed results....**



## General Information

- » **Workshop date:** December 10, 2010
- » **Location:** Whistler, Canada (held at [NIPS 2010](#))
- » **Submission deadline:** October 8, 2010
- » **Organizers:** [Hanna Wallach](#) and [Jennifer Wortman Vaughan](#)

The call for papers (plain text) is available [here](#).

## Overview

Computational social science is an emerging academic research area at the intersection of computer science, statistics, and the social sciences, in which quantitative methods and computational tools are used to identify and answer social science questions. The field is driven by new sources of data from the Internet, sensor networks, government databases, crowdsourcing systems, and more, as well as by recent advances in computational modeling, machine learning, statistics, and social network analysis. The related area of social computing deals with the mechanisms through which people interact with computational systems, examining how and why people contribute to crowdsourcing sites, and the Internet more generally. Examples of social computing systems include prediction markets, reputation systems, and collaborative filtering systems, all designed with the intent of capturing the wisdom of crowds. Machine learning plays an important role in both of these research areas, but to make truly groundbreaking advances, collaboration is necessary: social scientists and economists are uniquely positioned to identify the most pertinent and vital questions and problems, as well as to provide insight into data generation, while computer scientists are able to contribute significant expertise in developing novel, quantitative methods and tools. To date there have been few in-person venues for researchers in these traditionally disparate areas to interact. This workshop will address this need, with an emphasis on machine learning. The primary goals of the workshop are to provide an opportunity for attendees to meet, interact, share ideas, establish new collaborations, and to inform the wider NIPS community about current research in computational social science and social computing.

## Topics of Interest

We welcome contributions on both theoretical models and empirical work, as well as everything in between, including but not limited to the following areas of research:

- » Automatic aggregation of opinions or knowledge

“This is fully based on computer related, Now a days all the people and all the organization mostly depends on the computer. All are believe the computer but not a people.”

# “Markets as a Forecasting Tool”



# “Synchronous Experiments on Mechanical Turk”



# “Hybrid Human-Machine Systems on Bandit Problems”

- Have a bad guy dressed in black & white stripes
- Have him steal a computer
- The computer falls and turns on
- He is amazed by the technology and starts using it
- Curtain comes down and comes back up
- He is wearing a suit – **“that would be funny haha form a bad guy to a business professional”**

# “Hybrid Human-Machine Systems on Bandit Problems”

*[GS1 is pretending to drive a wagon, GS2 approaches holding a toy gun, wearing a bandana]*

**GS2:** Stick 'em up. This is a hold-up!

**GS1:** Not so fast you bandit! Computer! Engage auto-defense cyborg systems!

*[GS3 appears doing best impression of robot/cyborg]*

**GS3:** Resistance is futile! You will be assimilated...

“Rickroll the entire audience. This would probably be a first for an ENTIRE conference audience. The crowd would like it because it was suggested by an MTurk worker (and NIPS enthusiast).”

**Total cost of skit: \$2**  
(plus \$0.99 for the Rick Astley mp3)

**Verdict: WIN!!!!**