

Buffalo Hird
CS186
Assignment 5

Problem 1:

1a) This name is chosen to be named after the Turkish Mechanical Turk which was a machine which would play chess in the 18th century but which was secretly a man inside the machine playing chess. This name was chosen as Amazon Mechanical Turk involves delegating function calls to human participants such that it appears that there is a machine executing when it is really a human calling the shots.

The slogan artificial intelligence is apt because it simulates AI in places where it is difficult for computers to intelligently act by using humans to artificially produce AI in a way that is not actually AI but instead artificial AI. It is a sort of paradoxical and awesome nuanced name.

1b) It involved users revising the description of the stick figures and leaves such that we might receive a better description. It was accomplished by putting up consecutive HITs which asked for a better description than the previously provided image.

1c) <http://www.azernews.az/analysis/65642.html> An article on the changing workforce, especially in the eyes of Marx who believed increased productivity would not lead to such an extent of change that whole industries could be destroyed. Instead, we are saying a new paradigm via mechanical turk where workers who are no longer useful for their brute force are now able to provide menial work using their brains. As the article claims, “welcome to the virtual sweatshop economy”.

Problem 2:

2a) Done in code

2b iv) It returns $n!$ as it multiplies $f(1)$ through $f(n)$ where each $f(x)$ returns x such that we have $\sum_{i=1}^n i$.

Problem 3:

3a) account created online

3b) I was required to label images of individuals and receipts (separately). After which point I was notified that I would be notified when my answers had been approved or rejected.

3c) downloaded the TurkIt framework

3d) reviewed the mturk master object for TurkIt

3e) added \$7 to account and filled out cs186-mturk-intro.js

Problem 4:

4a)

The screenshot shows the top of the Amazon Mechanical Turk interface. At the top, there is a search bar with the text "Find HITs" and a dropdown menu showing "HITs" and a search icon. To the right of the search bar is a text input field with the placeholder text "containing". Below the search bar, there is a timer that reads "Timer: 00:00:00 of 60 minutes". To the right of the timer, there is a button that says "Accept HIT". Below the timer and button, there is a section titled "Pick-a-number" which contains the following information: "Requester: Buffalo Hird", "Qualifications Required: None", and "Reward: \$0.00". Below this section, there is a large empty box.

4b) (for some reason, the last and 5th assignment wouldn't get accepted :()

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5a) The object passed in to createHIT as an argument is a params object. The components of params are 1) title: the title of the HIT, 2) description: a description of the HIT, 3) question: an XML string that is printed to the screen (can be replaced by a url to a page for the question), 4) reward: the reward the worker will receive upon completion.

5b) in code

5c) in code

5d) in code

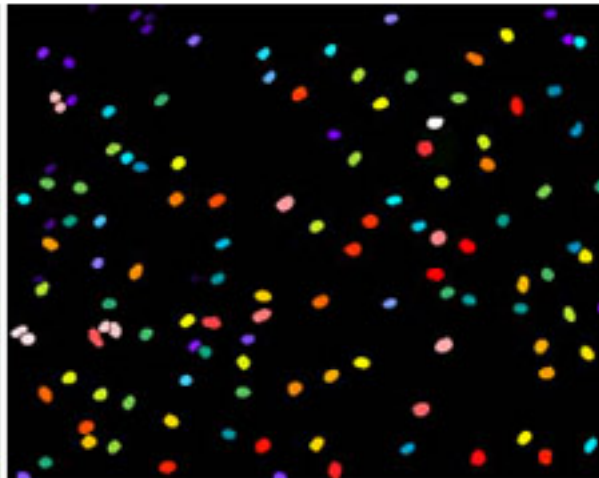
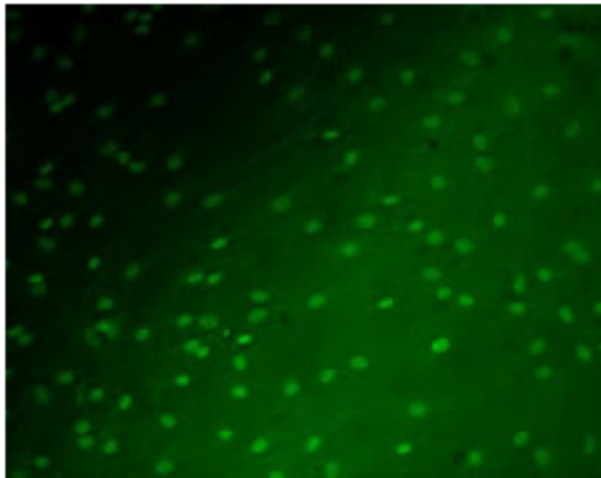
5e)

We found that Amazon sometimes just doesn't send us the answer for a while. That was nice, but other than that, we found that people answer these

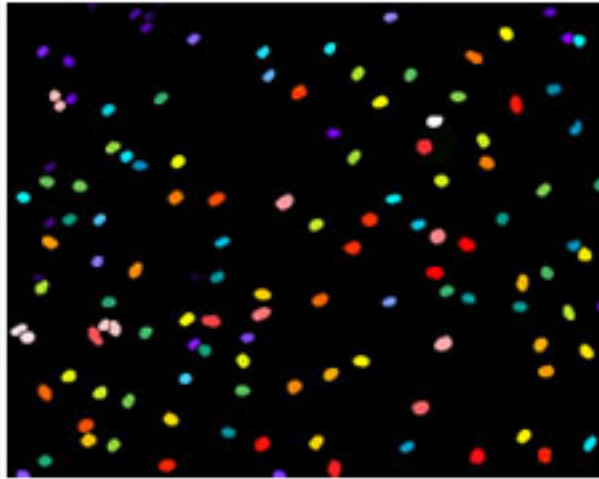
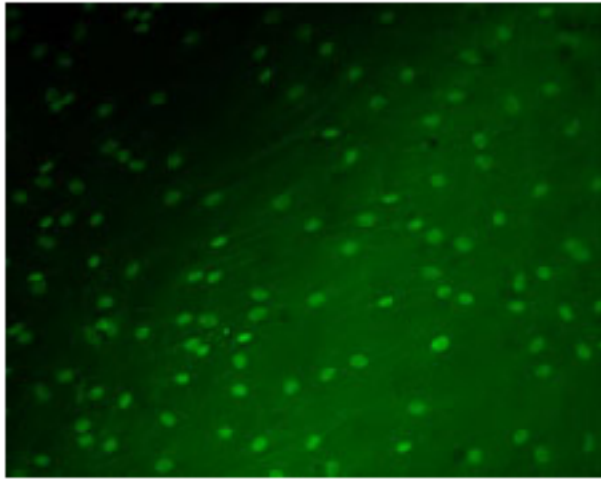
questions so insanely quickly. We posted it and within 2 minutes had an answer even though we only paid 10 cents. We got an answer of 123 and it was confirmed in the vote.

Snapshots of original HIT and verification HIT:

- Please count the number of nuclei in the left picture.
- People will vote whether to approve your work.



- Please count the number of nuclei in the left picture.



☐ Close (+-5) of 123

☐ Not close to 123

Problem 6:

We describe our approach. We note that we had issues getting images to load in our browsers though it seemed to work for our workers.

(a) The HTML code that was shown to workers (with a snapshot) :

Compare Two Pictures

Requester: Buffalo Hird

Qualifications Required: None



(b) The payments and/or voting mechanisms you had in place :

We use a voting scheme such that we offer each image pair to n workers (where we defined n here as 5 workers). We then take the best result of these, assuming that these are the correct pairwise comparison and return this pairwise evaluation for our insertion sort function. We note that even if one of these pairwise temporal comparisons was incorrect, that insertion sort looks at all $n-1$ images for each n images such that we expect to find a suitable ordering even if

some of the n^2 comparisons are wrong.

We have made a rudimentary payment rule such that any worker is paid and not just those who provide the best answer, paying all workers \$0.05 per HIT.

(c) The submissions from workers (with a few snapshots) :

we only included one snapshot as they are uninteresting to look at

Review Submitted Assignments (showing page 1 of 1)

Select Assignments to approve or reject then click "Submit." When you approve an Assignment, you will be asked to provide a result. When you reject an Assignment, you will be asked to provide a reason for rejection.

| Approve | Reject | Worker ID | Result |
|--------------------------|--------------------------|---------------|--------|
| All · None | All · None | | |
| <input type="checkbox"/> | <input type="checkbox"/> | A11GIYESSL1GZ | Left |

(d) The final ordering obtained by your human computation algorithm, and some of the intermediate algorithmic steps in obtaining the ordering :

After 3 iterations we had ordering:

SzBlk.jpg
ZiusC.jpg
WPLAo.jpg
XcGBz.jpg
YdL3d.jpg
Sbkem.jpg
r53qG.jpg
RNfpa.jpg

After our n^2 pairwise comparisons we received final ordering:

SzBlk.jpg
XcGBz.jpg
ZiusC.jpg
WPLAo.jpg
RNfpa.jpg
Sbkem.jpg
r53qG.jpg
YdL3d.jpg

(e) Any experiments you performed to pick the optimal design :

We decided to go with Insertion Sort because it probably has better results due to redundancy as compared to other sorts with fewer steps. We expect this to work best since the ordering of these pictures is pretty ambiguous, thus the more comparisons we can get, the better the accuracy. No, it's not the most algorithmically efficient mechanism, but it should give us the more correct answer; something that is not entirely trivial when the comparisons involve more than just "is this number bigger than that number?" but rather "does it look like this picture happened before that one?".