Author: Leo Goldman

Created: 10/23/2019

Last Edited: 3/4/20

Paying MTurk Worker Bonuses via Amazon Web Services (AWS) API

Preparing the command line arguments

Note: You can use the R Markdown file “Qualtrics\_MTurk\_Bonus\_Processing\_Template.Rmd” to take care of Steps 2-5 in this section. See “Using Bash to Efficiently Pay MTurk Bulk Bonuses.docx” for more information.

1. Download the batch data from MTurk by signing in as a requester, selecting “Manage” in the toolbar, clicking “Review Results,” clicking “Download CSV” (this will take you to a new page where it prepares the CSV and then click “download”)
2. Have prepared a separate Excel/CSV with the ID (Survey) codes and the amount to pay each worker. In other words, this is a column of bonus amounts next to a column of survey IDs, where each row is one worker.
3. Match the MTurk workers to the bonus amounts. This can be done with a VLOOKUP function in Excel as follows (certain syntax may need to be changed):

=VLOOKUP(AB2,AH:AI,2,FALSE)

where the first argument is the lookup value (a matching survey code),

the second argument is the array with survey codes and bonus amounts (the survey codes need to be in the first column),

the third argument is the column in that array with the bonus amounts, and the fourth argument is “FALSE” for exact matches.

1. Create an additional column, “Reason,” with some text explaining the reason for the bonus (this can be anything such as a thank you, score, etc., but it is required).
2. Now that the bonus amounts are in each column along with all the data from MTurk, prepare the string (text) that will be entered into Terminal:

="aws mturk send-bonus --worker-id "&P2&" --bonus-amount "&AC2&" --assignment-id "&O2&" --reason "&AF2

where the cell references are to the appropriate columns.

Paying out the bonuses

The following will require that the AWS API has been installed. In Terminal, type

“sudo pip install awscli --ignore-installed six”

If this doesn’t work for some reason, try these three lines (or see the [user guide](https://docs.aws.amazon.com/cli/latest/userguide/install-bundle.html)):

**curl "https://s3.amazonaws.com/aws-cli/awscli-bundle.zip" -o "awscli-bundle.zip"**

**unzip awscli-bundle.zip**

**sudo ./awscli-bundle/install -i /usr/local/aws -b /usr/local/bin/aws**

1. Open Terminal
2. If this is your first time using the API or this specific MTurk account, type “aws configure” and then enter your Access Key ID, Secret Access Key, “us-east-1” for region (if that doesn’t work try “us-west-2”), and “json” for output format
   1. To obtain account keys, log into your AWS account, select the account dropdown menu in the upper-right of the screen > “My Security Credentials” > “Access Keys” > “Create Access Key” and this should let you download both your Access Key and Secret Access Key in a CSV file.
3. To view your account balance at any time type “aws mturk get-account-balance”. If your account balance does not come up, the AWS API is not properly configured.
4. To send a bonus enter the string previously prepared (possibly in Excel) “aws mturk send-bonus --worker-id XXXXXXXX --bonus-amount X.XX --assignment-id XXXXXXXXX --reason "Thank you for XXXXXX"
   1. Recall that AWS takes an extra fee so any bonus you send will deduct 1.2x the bonus amount from your account
   2. Make sure you do not have any exclamation points in the “reason” field as these have different meanings when input in Terminal (nothing bad will happen, but the command won’t work)
5. You can send multiple bonuses at once by copying and pasting multiple send-bonus strings (lines of text) at once. More than six or seven at once, however, may cause one or two to not go through, so pay close attention. Additionally, pasting in five lines, for example, will automatically run the first four lines and you will have to hit Enter again to run the last line and pay the fifth bonus.

Tips & Tricks

1. Create an alias in Terminal for “aws mturk get-account-balance”
   1. For example type in the command line ‘alias gab=”aws mturk get-account-balance”’ and then for this Terminal session gab will get the account balance (can make this a permanent alias with some [more involved work](https://wpshout.com/quick-guides/make-bash-alias/))
2. Filter out bonus amounts for zero in Excel
   1. If you have survey codes corresponding to a bonus amount of $0.00, then you can filter these out in Excel (Data > Filter) to shorten the process of entering commands into terminal.
   2. If you do this, make sure you filter by the VLOOKUP bonus amount column (aka the column that contains the bonus amounts corresponding to the command line in that row.