Experiment Tracking UI - Usability Testing Plan

Recruiting

Using www.userinterviews.com this testing is part of a beta program which recruited 6 users, all of which have answered a question defining their profession as "data scientist".

2 users have experience of 0-3 years (novice)
2 users have experience of 4-6 years (mid-level)
2 users have experience of 7+ years (experienced)

Contact Basel Fakhoury <basel@userinterviews.com> for more information and access to the www.userinterviews.com account.

Each subject will be asked the same series of general questions to help gauge how familiar they are with deep learning. Each subject be shown a video walkthrough of the CLI example for kicking off an experiment and asked the same series of general questions to gauge whether or not they understand what an experiment is from the CLI. Each subject will be given a link to the cloud GUI of the experiment tracking MVP and asked a series of qualitative questions regarding the GUI.

Privacy Plan/Release

The following .pdf file release form needs to be sent to each user prior to conducting the usability testing. The release form will be sent to each user by the 3rd party vendor contracted to recruit external data scientists (www.userinterviews.com).

Release form:
https://drive.google.com/a/intel.com/file/d/0Bxztgl9QdQk4Z3cyOVgyLURkQnM/view?usp=sharing
need to make this a form fill .pdf file before sending to users

Introduction

Thank you for taking the time for this usability test session. This usability testing focuses on Intel Nervana's cloud deep learning studio, new experiment tracking functionality. The way this is going to work is I will start out by asking a couple of general questions. I will present a video walk through of a command line interface of a new product we are working on which is XX minutes long. Based on that video I will ask you a few more questions regarding the content in the video. Then I will provide you a link to a website user interface and ask you to share your

desktop screen with me. I will ask a couple of questions on your first impressions and then give you 10 tasks to complete using that user interface and ask a few follow up questions. The entire session will be recorded.

General Questions

Question 1: On a scale of 1-5 how well do you understand deep learning? (1 being I don't understand it at all, and 5 being I am a deep learning expert)

1   2   3   4   5

> *Reasoning*: This will help me understand which of the users are new to deep learning and which are familiar with deep learning.

Question 2: If I told you that we allow data scientists to conduct deep learning experiments, what do you assume an experiment is?

> *Hypothesis:* The term "Experiment" doesn't exist in data science, each explanation will be slightly different but might give us a good idea of what users first expect from a "deep learning experiment"

I am going to present a video showing you the command line version of a recent addition to our deep learning software product. I will then ask you a few questions after you have watched the video.

> ***Link to video:***

Video Questions

Question 1: After watching this video, does this CLI example of an experiment, meet your expectations of how you defined the experiment in question #2?

> *Reasoning:* The answer to this will us understand if what we built meets a users' expectations based on the naming of the tool.

Question 2: Is there anything you noticed that didn't sit right with you as a data scientist?

Question 3: On a scale of 1-5 how useful do you think this tool will be for data scientists based on your very limited preview? (1 being not useful at all and 5 being extremely useful)

1   2   3   4   5

Reasoning: This will give us a general usability ranking for the CLI portion of the tool which we can then compare to the GUI portion of the tool.

I am going to send you a link to an online prototype for a tool that we are designing. The prototype is not fully functional so some of the links may not work properly, but feel free to click around a test any links you feel like testing. Please be as vocal about what you are doing as possible.

Link to prototype:

GUI Questions

Question 1: Now that you are looking at this UI, what do you think an experiment is in this context?

Hypothesis: The UI should be intuitive enough so that the user will answer somewhat close to the following: an experiment is a group of model training runs.

Question 2: What is the difference between a model and an experiment in this context?

Reasoning: This will help us to determine if the user understands the difference between a model and an experiment

Setup: You are a data scientist and you started an experiment called "XXXX"

Task 1: Where would you go in this UI to view the different training runs in an experiment?

Hypothesis: The user will click on the name of the experiment from the experiment list page.

KLM Measurement:

Task 2: How many training results are being tracked in this experiment?

Hypothesis: The user will click on the training run named and tell us that there are X number of training results tracked in this experiment.

KLM Measurement:

Task 3: How many training runs are there in this experiment?

Hypothesis: The user will tell us that there are X number of training runs in this experiment.

Task 4: How many parameters are being tracked in this experiment?

Hypothesis: The user will tell us that there are X number of parameters being tracked in this experiment.

Question 4: On a scale of 1-5 how useful do you see this GUI for experiment tracking? (1 being not useful at all and 5 being extremely useful)

1   2   3   4   5

Reasoning: This will allow us to compare the measurement among different experience levels, as well as compare to the CLI portion of the experiment tracking.