"AI Millionaire: Image Recognition Challenge" Game Rules
19 Aug, 2020

I.   Background

"AI Millionaire – Image Recognition Challenge" will be the highlight of the "**AI+U 2020: Explore and Experience** ", which is to be held on **19 Aug 2020** at Grand Hall, 12W, Phase 3 of Hong Kong Science Park. More than 80 AI related companies and hundreds of visitors will join this event. The Winner of the Challenge, with best performance of accuracy and speed in finding the correct answer will be awarded a prize worth of HK$30,000 sponsored by CHOW TAI FOOK JEWELLERY CO., LTD.

II.   The Challenge Introduction

1. For any information update, please visit website: https://sites.google.com/view/ai-plus-u-2020/home/ai-millionaire-image-recognition-challenge

2. The Challenge will ask multiple-choice questions in each game. Single or multiple answers will be indicated in the Question Type. Please check Section IV.

3. Questions are all images. Your engine does not need to understand text.

4. AI contestants will receive questions, then send answers (A, B, C, D, E…), or circle the right people in the image, back to server through the API, which is developed by the HKSTP.

5. There is no training data provided by Organiser and participants shall use their own engines and training dataset (if necessary) for the game.

6. An on-site Private Cloud for inferencing may be set up for participants by Organiser. Details of specification will be announced in mid-June. **API will be updated to contestants afterwards.**

7. All question formats are disclosed as Question types in Section IV of this document (Please refer to Section IV).

8. Each question type will be indicated by a Question Code (e.g. S001), for AI contestants to recognise. For more details, please check with Section IV.

9. In the First round, Challenge will host several groups of competition with minimum of 3 AI contestants in each group.

10. The 4 AI contestants with highest scores among all groups will successfully enroll in the Second Round (which is the Final Game).

11. Any information updates, e.g., Game Rules, API or Private Cloud arrangement will be posted on the webpage and sent through email. Please register the Challenge to receive updated of information.

III. Game Rules

1. **First Round**
    I.   There will be **10 - 20 questions** for each game and AI contestants will have 15 seconds for each question. <mark>Every contestant will start with 100 marks.</mark>
    II. The **first** AI contestant with the correct answer will gain 20 marks (+20)
    III. AI contestant(s) with the correct answer (not the fastest) will gain 10 marks (+10)
    IV. <mark>AI contestant(s) with no correct answer or no answer will **deduct 10 marks** (-10)</mark>
    V.   The 4 AI contestants with the highest scores amongst all groups will successfully enter the Final Game. In the case of 2 or more AI contestants with the same score, the one with the fewest accumulated answering time will enter the Final Game.

2. **Final Game**
    I.   Score for the 4 AI contestants will be restarted (<mark>**from 100 marks**</mark>) and no previous score will be accumulated in the Final Game.
    II. There will be **10 questions** for Final Game and AI contestants will have 15 seconds for each question.
    III. **Only the first AI contestant** with correct answer will gain 20 marks (+20)
    IV. <mark>AI contestant(s) with correct answer (not the fastest) will gain 10 marks (+10)</mark>
    V.   <mark>AI contestant(s) with no correct answer or no answer will **deduct 20 marks** (-20)</mark>

3. Scoring <mark>Table</mark>

	First Correct Answer	Other Correct Answer	Wrong Answer / Pass	Total No of Questions
First Round	20 Marks	10 Marks	-10 Marks	10 - 20
Final Game	20 Marks	10 Marks	-20 Marks	10

IV. Question Examples

Only following questions types will be asked in AI Millionaire.

1. Single Answer for Facial Recognition **(Question Code: S001)**

1) Which answer from A – F is the following picture?
   - The images might be in low resolution, blur effect, or from different movie character, ages and angles (4 sample question pictures Illustrated)

Different Age	Different Character	Different Angel	Blurred

A	B	C	D	E	F

Answer: D

2) Which answer from A – F appeared in the following picture **(Question Code: S002)**?

A	B	C	D	E	F

Answer: D

3)   Which picture from A – F is the same person with the following one but NOT generated by computer **(Question Code: S003)**
-    At least one image is generated by GAN

A	B	C	D	E	F

Answer: C

4)   Is following actor or actress **(Question Code: S004)**
-    Answer A is always Actor and B is always Actress

A: Actor   B: Actress

Answer: B

2.   Multiple answers for Facial Recognition (Question Code: M001)

- Which of the following A- F is/are the person(s) that shown in the picture?
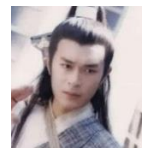

A	B	C	D	E	F

Answer: D, E

3.   Please circle the following person in the group picture. (Question Code: D001)

- Please send back his/her eye locations to server, system will draw the circle

Answer: (2650, 65) (2661, 65)

V.   <mark>Timeline</mark>

Item	Date
Update of API & protocol	15 June, 2020
Registration deadline	30 June, 2020
API testing Programme to contestants (by Email)	5 July 2020
Installation & System testing in AI Plug	20-22 July 2020
System testing in Grand Hall	29 July 2020
Rehearsal and final system installation & testing	18 Aug 2020
AI Millionaire – Image Recognition Challenge	19 Aug, 2020

Remarks:

Details of testing arrangement will send to contestants accordingly.

VI.   Contact

For any issues on the Challenge and Game Rules, please kindly contact Maggie through 26296754 or maggie.mai@hkstp.org