

[WCG AI MASTERS Online Preliminary Participant Guideline]

❑ General Introduction

WCG AI MASTERS is part of the Global eSports festival WCG which will be held in Xi'an China on 2019.

16 teams will advance to the main round in WCG 2019 Xi'an through WCG AI MASTERS online preliminary rounds.

WCG AI MASTERS is a 5:5 AI robot soccer game where each participant develops an AI program that controls five robots in a team to defeat the opponent participant program.

WCG provides a development platform where each participant can develop an AI program to participate in the robot soccer competition. Using the platform provided, you can develop a player program in C++ or Python programming language using the example programs provided. You can train or evaluate the performance of your AI program using the online simulator instance, where you can also control the simulation parameters to boost your development.

For more detailed information, we provide system manuals are provided online in Github wiki and also are downloadable in the WCG website.

- AI Simulator Manual and Development Guide
 - Github wiki: <https://github.com/wcgaimasters/WCG-AI-MASTERS-Manual/wiki>
 - Download: You can download it on WCG website
- AI Online Platform Manual: It will be opened soon on WCG website and WCG AI MASTERS Github.

❑ Entrants

- Age 16+: Anyone born before April 1st, 2003 can participate in WCG AI MASTERS.
- Capable of developing a program in C++ or Python

❑ System and Communication Languages

- **All materials used in WCG AI Masters (AI Online Platform Manual, AI Simulator Manual and Development Guide, Participant Guideline and AI Online platform) are provided in English only.**

❑ Event Schedule

Date	Event
Apr 1~May 10	Online Application
Apr 15	AI Online platform will be open
May 15	The draw result for WCG AI Masters preliminary group will be announced
Apr 15~May 31	AI algorithm development and learning period
May 31	Program submission
June 10	Finalist Announcement
July 18~21	WCG 2019 Xi'an

❑ Application

- For application process, please refer to the AI Online Platform Manual on the website
- After you submit your application form, WCG AI MASTERS administrator will assign development instances and send you the assigned ID and password via e-mail.
- Entrants will receive an email containing a URL which links to the AI Online Platform, this URL will only be used by the one who received the email and is related to the event participation and this email must not be shared with others.
- WCG will not be responsible for any problems occurred in the process of entrants sharing the URL with others.
- WCG AI MASTERS application may be closed earlier due to the application status.

❑ Development and Learning Instances Information

- WCG provides an AWS EC2 instances for development and learning on AI Online Platform as below, for more detail information please refer to the AI Online Platform Manual

Instance	Type	CPU	Memory	GPU	OS	Available Time
CPU	t3.medium	2 core	4 GB	-	Ubuntu 16.04	150 hours
Player GPU	p2.xlarge	4 core	61 GB	NVIDA TESLA K80	Ubuntu 16.04	100 hours
Simulator GPU	p2.xlarge	4 core	61 GB	NVIDA TESLA K80	Ubuntu 16.04	100 hours

- CPU instance is for developing your AI program.
- Simulator GPU instance is for simulation and training your AI program.
- Player GPU instance is only provided to deep-learning based participants, and training result of your AI program will be located in Player GPU instance
- WCG doesn't provide Player GPU instance for rule-based participants.
- A total of 350 hours of instances time is given to the deep-learning option.
- A total of 250 hours of instances time is given to the rule-based option.
- The time distribution will be in 3 steps and the time schedule for each step is stated below.

STEP	CPU	Player GPU	Simulator GPU
1 st Step	100 hours	50 hours	50 hours
2 nd Step	25 hours	25 hours	25 hours
3 rd Step	25 hours	25 hours	25 hours

- Entrants should turn off the AWS instances before the given time for each step is over, and ask for additional time to aimasters@wcg.com.
- If the AWS instances is turned on until the given time is over, the AWS instance will be shut down and all the data will be erased.
- WCG will not be responsible for the erased data in the situation stated above. Please make sure that the AWS instance is turned off before the given time is over and ask for additional time to aimasters@wcg.com.
- You will not be able to access to the instances after using all the given time.
- WCG will not provide additional time for time loss caused by participant's mistakes such as not turning off the instances when not using them.
- Please be careful and remember to turn off your instances after you finish your development or training.
- If you meet some errors caused by AI Online Platform, please send an email to aimasters@wcg.com with error messages.

❑ Preliminary Rounds

- Preliminary Rounds will be started after WCG AI Online Platform is opened on April 15.

- For using AI Online Platform, please refer to AI Online Platform Manual.
- After the submission deadline, the preliminary round competition will be performed in the form of a Group Stage tournament based on AI programs submitted by teams.
- The finalists that advance to WCG 2019 Xi'an will be determined through Group Stage.
- The finalists will be announced on WCG website with competition video clips.

□ **Group Stage**

- The Participant teams will be divided in two groups (The number of groups will be adjusted depending on the number of teams involved)
- The draw result for WCG AI Masters Preliminary Rounds Group Stage will be announced on May 15, 2019 via the WCG website.
- In Group Stage of the tournament, each team plays one match against each of the other teams in the same group (round robin)
- Each team will get three points per win, one point per draw, and zero points per loss.
- The ranking in each group is determined as follows.
 - a) greater number of points obtained in all the group matches;
 - b) greater number of points obtained in the group match (or matches) between the team concerned in the tiebreaker;
 - c) better goal difference resulting from the group match (or matches) between the team concerned in the tiebreaker. The "goal difference" is the result of the goals scored minus the goals against. A "better goal difference" means a higher value goal difference (e.g., zero is better than -1, +4 is better than -5)
- If two teams are tied in their group after applying the above-mentioned rules, a single game rematch shall take place. If after 10 minutes, the rematch ends in a draw, extra rematch shall be played.
- If three or more teams are tied in their group after applying the round-robin ranking rules, another round-robin group ("tiebreaker group") shall be played among the teams concerned.
 - a) greater number of points obtained in all the "tiebreaker group" matches;

- b) greater number of points obtained in the "tiebreaker group" match (or matches) between the teams concerned;
- c) better goal difference resulting from the "tiebreaker group" match (or matches) between the teams concerned;
- d) greater number of goals scored in the "tiebreaker group" match (or matches) between the players concerned;
- e) better goal difference in all the "tiebreaker group" matches;
- f) greater number of goals scored in all the "tiebreaker group" matches;
- Only sixteen teams from Group Stage will advance to the WCG 2019 Xi'an.
- The team leader from each team classified to the Main Round will be invited to attend the WCG 2019 Xi'an, China.