CGI Lab 團隊再創佳績！

抱走 AWS DeepRacer 世界冠軍

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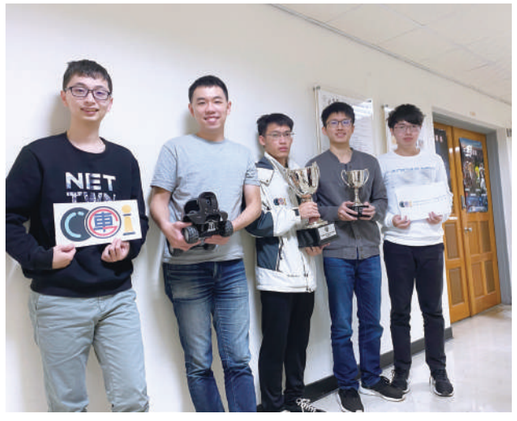
AWS DeepRacer 全球自動駕駛賽車聯盟總決賽於 2020 年 12 月 15 日舉行，由於受到疫情影響，本屆的所有賽事均移至線上進行虛擬賽，大會公佈最終的比賽結果，由國立交通大學電腦遊戲與智慧實驗室（CGI Lab）學生許博鈞和郭奎廷分別拿下總冠軍和季軍，繼前年朱詠嘉同學在比賽中獲得季軍後，再度成為台灣之光。

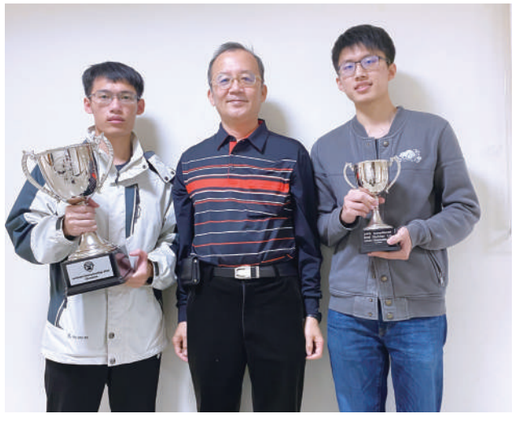
2020 AWS DeepRacer 全球自動駕駛賽車聯盟自去年三月起展開為期八個月的資格賽，儘管各地接受疫情所困，仍吸引世界眾多業界與學術界的高手參加，總計超過 1 萬人次的挑戰和篩選，最終由 112 位全球各界好手在線上進行分組淘汰賽。

AWS DeepRacer 是一個由進階機器學習技術「強化學習」（Reinforcement Learning，RL） 驅動的 1/18 比例自動駕駛賽車，自 Amazon Web Services（AWS）於 2018 年發表以來受到各界注目，並為此每年舉辦賽車比賽，參賽者須運用強化學習驅動，是 AWS 專為強化學習初學者所設計的機器，希望透過有趣和高娛樂性的方式為開發人員提供探索機器學習的機會。

藉由朱詠嘉學長過去在比賽中的經驗分享和傳承，這次 CGI Lab 做足萬全準備，從 3 月開始透過進行比賽和觀摩對手，不斷優化 RL 模型，只為獲得更好的成績。由學長黃勁博帶領高誌佑、許博鈞、郭奎廷和鄭紹雄四位學弟，爭取到冠軍賽的參賽資格，並在分組淘汰賽的第一組稱霸前四名，更是打敗去年的世界冠軍日本選手 Sola，全數晉級 32 強。

最後由許博鈞同學和郭奎廷同學出戰總決賽，值得一提的是，兩位也是晉級決賽唯二的學生代表，並在賽前便已獲得相當亮眼的成績，許博鈞同學在資格賽的線上對戰聯賽便已得過數次冠軍，而郭奎廷同學則是在去年 5 月的線上高峰會競速賽中獲得冠軍殊榮。在總決賽兩位同學與六位各國企業開發人員透過線上模擬環境模式對戰，以最短時間完成 5 圈，分別獲得 2 分 0.856 秒和 2 分 2.655 秒的好成績，成功打敗許多優秀的企業參賽者，將世界總冠軍抱回台灣，再度向世界顯示台灣的科技人才不容小覷。





The Team of CGI Lab Makes Another Great Achievement!

Taking Home the 2020 AWS DeepRacer Championship

The 2020 AWS DeepRacer League Finals was held on December 15, 2020. Due to the impact of the pandemic, all events of this year were going full virtual. AWS DeepRacer League announced 2020 Championship Cup winner Po-Chun Hsu in Taiwan and third-place winner Kuei-Ting Kuo from CGI Lab in Taiwan, who are both from Computer Games and Intelligence Lab (abbr. CGI Lab) led by Professor I-Chen Wu, College of Computer Science, National Yang-Ming Chiao-Tung University. After Yeong-Jia Roger Chu, from CGI Lab too, won the third-place award in the competition last year, our students are, once again, the light of Taiwan.

The 2020 AWS DeepRacer League has launched an eight-month qualification tournament since March last year. Despite impact of the pandemic, the tournament still attracted developers from academia and industry around the world to participate in the qualifying stage, having more than 10,000 challenges and screenings. Finally, 112 players from all over the world advanced to the knockout stage of the championship online.

AWS DeepRacer is an autonomous 1/18th scale race car designed to test RL (Reinforcement Learning) models by racing on a physical track. Since AWS DeepRacer was announced by Amazon Web Services (AWS) in 2018, it has attracted attention from all over the word and the racing competition is held every year. Participants develop a reinforcement model to control throttle and steering. The platform was designed by AWS for RL beginners to provide developers with opportunities to explore machine learning in a fun and highly entertaining way.

Based on Yeong-Jia Roger Chu's past experience in the competition, the CGI Lab is fully prepared this time. Starting from March, through competitions and observation with opponents, the RL model has been continuously optimized in order to achieve greater results. Senior student Jin-Bo Huang, leading four younger students, Chih-Yu Kao, Po-Chun Hsu, Kuei-Ting Kuo, and Shao-Xiong Zheng, advanced to the finals and dominated the top four places in the first group of the knockout stage. He also defeated last year's world champion Sola of Japan. All advanced to Top 32.

In the end, Po-Chun Hsu and Kuei-Ting Kuo represented the CGI Lab in the finals. It is worth mentioning that both of them are also the student representatives who have advanced to the finals, and their results are very impressive. Po-Chun Hsu has won several championships in the qualifying stage. Kuei-Ting Kuo won the championship in the online summit competition in May last year. In the finals, Po-Chun Hsu and Kuei-Ting Kuo competed against six professional developers from different countries in the online simulation environment, completing 5 laps in the shortest time, 2 minutes 0.856 seconds and 2 minutes 2.655 seconds respectively. They successfully defeated many outstanding professional developers, and took the world championship cup back to Taiwan. Once again, they showed the world that Taiwan's scientific and technological talents should not be underestimated.