艾思能達（香港）有限公司
ASK Idea(Hong Kong) Limited

奇趣IT識多啲計劃
+
IT Innovation Lab

ASK Idea (Hong Kong) Limited

機甲大師青少年挑戰賽2021(香港站)

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➢教育 x 科技

✓專業教育團隊過去一直與不同辦學團體合作，從教科書、電子教育、 STEM、QEF 等多個項目與校結伴，共同發展、優化課程，為學校提供完整的一站式方案。成立至今，我們已獲得多個國際品牌教育產品的唯一供應權，目標引入世界各地的產品及服務到香港。

➢香港區教育夥伴(Education Partner)

✓DJI Education 大彊創新科技有限公司

✓Cyberport Community Company

✓Science Centre Singapore

DJI Education Lab

艾思能達(香港)有限公司
ASK Idea(Hong Kong) Limited

DJI Education

- 全國青少年無人機挑戰賽(香港站)
- RoboMaster 青少年挑戰賽

RoboMaster 2021 青少年挑戰賽

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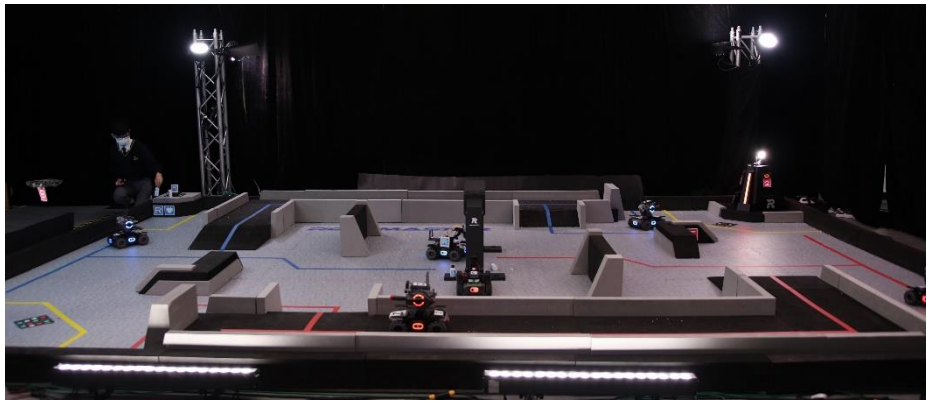
- 獨家承辦香港站賽事
- 80間中學名額
- 16間小學名額




RoboMaster EP
Tello Talent
拓展教育新邊界

各機械人技術及學習領域

- 綜合應用機械與編程，應用於賽事期間，取得優勢！
- 透過即時戰略運用，加強團隊協作及溝通能力，打出隊形！
- 面對突發狀況，冷靜思考，解決難題！

一機多形態

- 教學知識點更全更豐富

轉接擴展板
提供2*7pin 2.54mm 介面，支援**I2C**、**SPI**、**UART**、**GPIO**多種程式設計協定，並提供**5V/3.3V** 電源

- **強大軟體平臺**

  教學更輕鬆

- **相容多方硬體**

  搭配現有器材

電源轉接模組

樹莓派

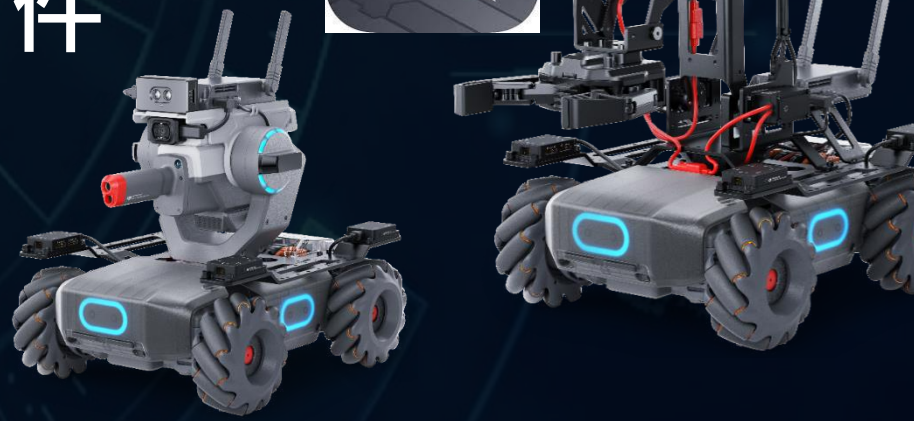
Arduino

Microbit

Jetson Nano

- **開放軟件開發套件**

  二次開發



賽事三大特點：

- 全球獨創實體機器人Multi-player Offline Battlefield Arena(MOBA) 攻塔射擊對 抗賽事
- 多維度接觸機器人知識機械、嵌入式、演算法
- 結合操控技術、激烈對抗、對戰策略、程式編寫的綜合式對賽

RoboMaster 2021 青少年挑戰賽(香港站)

大疆機器人教育賽事體系

教學應用

DJI EDUCATION HUB

DJI EDUCATION HUB | Lab | App Center | Help Center | UPGRADE | Student Ryan Hu... Trial | Engli...

- Learning Resources
- My class
- DIY Programming

new
無人機 Python 與人工智能基礎
大疆教育教研組 14/09/2021
RoboMaster TT Python编程入門課程，以人工智能為前沿知識導向，...
16 Class Duration
High ... | DIY

new
無人機飛行入門與编程初階
大疆教育教研組 20/08/2021
RoboMaster TT圖形化编程課程，通過與生活緊密結合的知識搭配豐富...
17 Class Duration
Middl... | DIY

new
你好！特洛創造力無人機
大疆教育教研組 20/08/2021
本系列課程針對 8-12 歲的學生設計，共計 16 個課時，以虛擬人物"小志"...
16 Class Duration
Elem... | DIY

new
[Sample] Tello Talent Programming & AI: Python
DJI EDU Content Group 07/06/20...
[This is a sample lesson]This course takes you into the world of Python...
1 Class Duration
Middl... | Progr...

new
AI场景化解决方案-核电救援课程
大疆教育教研組 06/01/2021
与"AI智能场景化解决方案-核电救援"配套的课程，以图形化编程为主...
16 Class Duration
Middl... | AI

new
Python应用与机器人
大疆教育科研組 17/03/2021
Python应用与机器人，学习基础为，对Python已经有了基本的认识，能...
10 Class Duration
Middl... | Robo...

new
Python编程基础
大疆教育科研組 17/03/2021
Python编程基础，课程内容为Python基本语法，实验简单。主要分为6课...
12 Class Duration
Middl... | Progr...

new
Python进阶与人工智能
大疆教育科研組 17/03/2021
Python进阶与人工智能课程，在前两阶段课程基础上，进行人工智能基...
6 Class Duration
Middl... | AI

new
RoboMaster EP 假期营课程
大疆教育教研組 13/01/2021
RoboMaster EP短期集训课程，该课程中涉及机器人、编程、人工智能...
14 Class Duration
Elem... | DIY

new
RoboMaster EP 机器人与人工智能基础
大疆教育教研組 06/01/2021
RoboMaster EP机器人与人工智能基础课程，该课程以机器人与人工智...
12 Class Duration
Middl... | Robo...

new
RoboMaster EP 编程二阶课程
大疆教育教研組 06/01/2021
《RoboMaster EP编程二阶课程》为《RoboMaster EP编程初阶课程》...
15 Class Duration
Elem... | Progr...

new
RoboMaster EP 编程初阶课程
大疆教育教研組 06/01/2021
RoboMaster EP编程初阶课程，该课程通过情景故事与生活应用让同学...
15 Class Duration
Elem... | Progr...

全國青少年
無人機挑戰賽 (香港站）

- 編程障礙賽
- 多機編隊(群飛)

大疆教育

普及化甄選方案 (40人)

學生活動

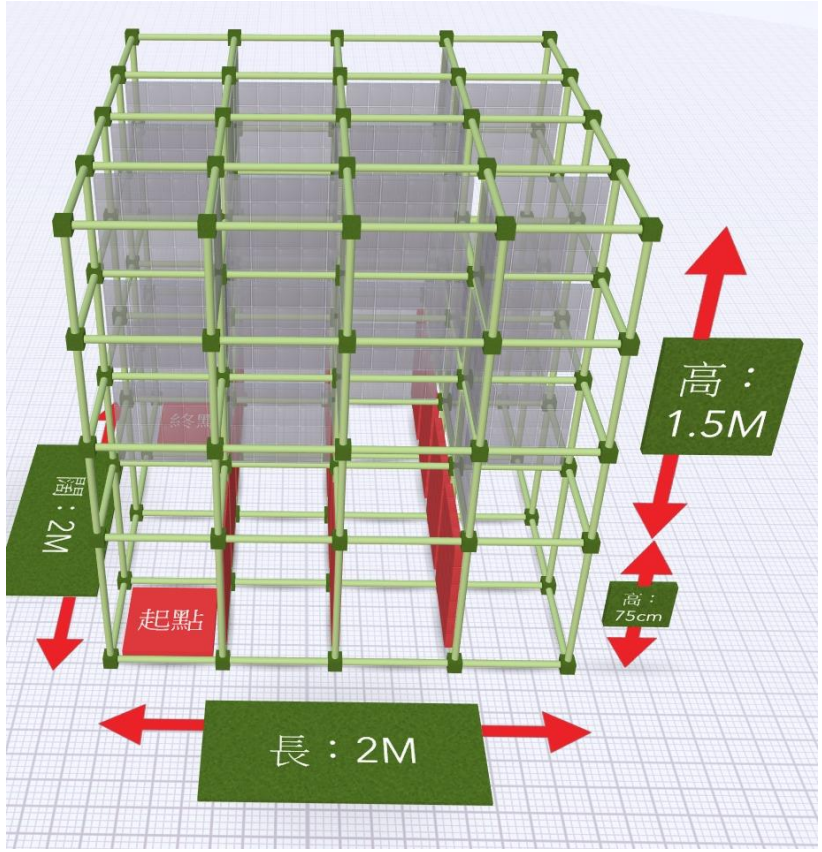
- 6小時學生培訓課
- 認識套件、遙控並編程操控
- 從中甄選出學生進一步特訓

特訓設計 – 賽事導向 (15小時, 20人)

賽事場景情景引入 → 問題討論 → 知識建構 → 探究測試 → 校內競賽甄選

無人機避障培訓內容

課堂	內容
第一堂	無人機飛行理論、手控飛行體驗
第二堂	手控飛行技巧
第三堂	簡單編程飛行
第四堂	邏輯飛行(I)
第五堂	邏輯飛行(II)
第六堂	邏輯飛行(III)
第七堂	編程坐標飛行
第八堂	定位系統與Mission Pad坐標飛行
第九堂	大型Mission Pad的應用
第十堂	編程飛行比賽



無人群飛課程

課堂	內容	課堂	內容
第一堂	群飛理論及路由器應用	第六堂	燈效編隊練習
第二堂	無人機群飛設定	第七堂	編隊跳躍編程練習
第三堂	簡易編隊練習	第八堂	多機編隊組合群飛表演準備
第四堂	大Mission Pad 的應用	第九堂	顯示板效果
第五堂	無人機燈效運用	第十堂	多機編隊組合群飛表演準備II

培訓內容

課堂	內容	課堂	內容
第一堂	Robomaster EP工程理論及手控操作	第六堂	Robomaster 底盤及雲台編程
第二堂	Robomaster 編程方式	第七堂	挑戰賽手動比賽訓練
第三堂	人工智能編程應用	第八堂	能量機關擊打編程
第四堂	圖像辨識編程處理應用	第九堂	機械臂取彈編程技巧
第五堂	傳感器(TOF)功能及應用	第十堂	挑戰賽比賽準備

建議計劃書

無人機編程避障任務

Part A: Particulars of the Applicant School 甲部：申請學校資料

Part B Annual Plan Part 1
Part B: Annual Plan (2020/21 School Year) 乙部：年度計劃書（2020/21 學年）I.
IT-related activities (extra-curricular activities or co-curricular activities) 與資訊科技相關的活動（課外活動或聯課活動）
Title:
英文：**Participation in Robotic Competition**
中文：機甲大師青少年挑戰賽

Description (including background, scope, list of activities, how the students are engaged in the activity, plan and schedule (if any)) 活動說明 （包括背景、範圍、活動列表、學生如何參與該活動、計劃及時間表（如有））

To prepare and support students to attend a competition of building robotic cars. It focuses on building the theoretical engineering knowledge and PID control application skills among youths. This program also helps them progress from mastering robotic basics and programming to AI and robot control theory. In the competition, students are required to integrate both robotic cars and drone to compete. Thus, the course will also cover basic control and knowledge of drone.

Technology 科技
- Coding / Algorithm 編程／演算法
- Computational Thinking 運算思維
- Robotics Coding 機械人編程
- Drone Coding 無人機編程

Objective / Primary Intended Outcome (Max 5) 目標／主要預期成果（最多五項）
- Cultivate students' interest in IT and foster an IT learning atmosphere at school 培養學生對資訊科技的興趣並在學校營造學習資訊科技的氛圍
- Enable students to keep abreast of new technologies 讓學生了解新科技的最新發展
- Enhance student's computational thinking skills 增強學生的運算思維技巧
- Enhance student's ability to apply the IT knowledge and skills learnt 增強學生應用所學的資訊科技知識及技能的能力
- Enrich students' learning experience e.g. competitions, visits, project learning, etc. 豐富學生的學習經驗，例如參與比賽、參觀、專題研習等

Further elaboration 進一步闡述
The school will support its students to participate in a local competition of building robot cars, including arranging short term courses of Robotics or AI for their preparation, supporting them to attend workshops organized by the organizer and providing technical support to the students, including hardware (e.g. Robotic kits &

無人機多機編舞計劃

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IT-related activities (extra-curricular activities or co-curricular activities) 與資訊科技相關的活動（課外活動或聯課活動）
Title:
英文：Advanced Drone Coding Swarm Fly Project
中文：無人機多機編舞計劃

Description (including background, scope, list of activities, how the students are engaged in the activity, plan and schedule (if any)) 活動說明 （包括背景、範圍、活動列表、學生如何參與該活動、計劃及時間表（如有））

Drone is now widely applied in many industries and significantly reformed human practice. Swarm-fly is 1 of the most popular application in drones. This program aims to introduce how we can code to fly a drone and teach students about the syntax and logic of drone swarm-fly, as well as to enable them to control more than 1 drone with 1 device via programming. All S.2 Students will get a chance to experience to control drone via coding.

Technology 科技
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- Computational Thinking 運算思維
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Further elaboration 進一步闡述
The Advanced Drone Coding Swarm Fly Project is composed of 4 parts: Introductory session, theoretical session, practical session, and challenging session. The networking information and engineering concept would be introduced in the theoretical part to let students have more understanding of the concepts. In the practical session, students would build a drone swarm fly performance to learn the design, set-up & programming for a swarm-fly performance.

Unit D2, 4/F, Freder Centre, 68 Sung Wong Toi Road, Kowloon, HK | askenquiry@askideagroup.com.hk | 2503 3018 | 2503 3800

機甲大師青少年挑戰賽

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謝謝