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Profile Summary

- Active student leader
- Awards in Robotic Design
- Exceptional personal endeavour

Education

2018-2022 The Hong Kong Polytechnic University

Bachelor of Engineering (Honours) Scheme in Mechanical Engineering (CGPA: 3.50/4.30)

2019-2020 Dean list

COMPUTER PROGRAMMING	A+
ENGINEERING MANAGEMENT	A
ENGINEERING DESIGN FUNDAMENTALS	A
VISUALIZATION AND COMMUNICATION IN DESIGN ENGINEERING	A

2022-now The Hong Kong Polytechnic University

Master of Philosophy of Department of Aeronautical and Aviation Engineering

Awards and Scholarships

Robotics & Design Competition

Year	Awards	Competition	Organization	Reason
2019	Best Engineering Design Award	The Robocon 2019 Hong Kong Contest	The Hong Kong Science and Technology Parks Corporation	Outstanding designs of robots (lightest weight, one battery for the whole energy system, etc.)
2017	2 Champion; 4 1st Runner-up; 3 2nd Runner-up	International Robotic Olympic (Different types of competitions: land-based & Ocean Exploration)	Hong Kong Robotic Olympic Association	Outstanding performances of robots
2017	(Senior Group) Second Prize, Best Design Award	Fun Science Competition 2017 "Stay right there"	Hong Kong Science Museum	Outstanding performance with accurate gear ratio

Other

Year	Awards	Organization
2018/19- 2021/22	HKSAR Government Scholarship Fund - Endeavour Merit Award	HKSAR Government
2019/20- 2021/22	The Hong Kong Jockey Club Scholarships – Undergraduate Scholarship	Hong Kong Jockey Club
2019/20	BEA Inspiring Student Scholarship 2019/20	The Bank of East Asia Charitable Foundation Limited
2018/19 - 2019/20	HKSAR Government Scholarship Fund - Talent Development Scholarship	HKSAR Government

Work Experience (PT: Part Time; FT: Full Time)

Project assistant in the Department of Aeronautical and Aviation Engineering, PolyU (PT) Sep 2022 – now

- Has associated with the research project “Research Centre for Unmanned Autonomous Systems”

Student Helper in Hong Kong Center for Construction Robotics (FT) Jun 2022 – Aug 2022

- Joining one of the existing start-up teams which is focusing on construction robots
- designing the mechanical structure of products and drawing the 3D CAD drawings

Student Assistant in the Department of Aeronautical and Aviation Engineering, PolyU (PT) Aug 2021 – May 2022

- Provided support to the High-speed Thermo-fluid and MAV/UAV Laboratory
- Contributed to a project for the development of Vertical Take-Off and Landing (VTOL) Unmanned Aerial Vehicle (UAV) for Air Quality Monitoring in the Greater Bay Area
- Designed the mechanical structure of a movable landing platform for UAVs and controlled its movement by Arduino programming

Student Assistant in the Department of Mechanical Engineering, PolyU (PT & FT) Dec 2020 – Jul 2021

- Provided support to the Automation, Robotics and Mechatronics (ARM) research group (Biomimetic Robotics Laboratory)
- Developed innovative solutions to automate robot arms, mobile robots, and other mechatronic systems for various tasks (3D object pick-and-place, robot navigation in an unknown environment, path planning, etc)
- Incorporated computer vision and artificial intelligence (AI) to enhance the performance and functionality of different systems

Robotics Team Coach in the Carmel Divine Grace Foundation Secondary School (PT) Sep 2018 – Aug 2020

- Led students to participate in International Robotic Olympiad 2019
- Taught students how to use CAD (Computer Aided Drawing) (2D: CorelDraw and 3D: SolidWorks)
- Taught students how to build robots with motors and servo motors

Extra-curricular Activities

- Internal Vice President, The Outstanding Teens Association Oct 2020 – Now
- Contacting and promoting events to OTA members
 - Handling Financial management
 - Coordinating internal administration and organizing external voluntary services (e.g., University Simulations in 2021 (<https://skmdonaldshek.wixsite.com/hkotausims2021>) and 2022 (<https://skmdonaldshek.wixsite.com/hkotausims2022>))
- Judge, The Hong Kong Robotics Club Apr 2018 – Now
- Demonstrated judgment in the competitions
 - Contributed to the preparation and event follow-ups
- Hong Kong Young Ambassador, Hong Kong Young Ambassador Scheme Oct 2016 – Now
- Contributing voluntary service (local service to promote Hong Kong tourism)
 - Helped in Tourism Promotional Events (e.g. 2019 Cathay Pacific International Chinese New Year Night Parade, Hong Kong Well-wishing Festival, etc.)
- Teammate, The Hong Kong Polytechnic University Unmanned Aerial Vehicles Team Sep 2019 – Aug 2022
- Had been prepared for UAV Challenge – Medical Rescue:
 - Designed a mechanical structure for releasing a ground vehicle from a fixed wing VTOL to provide at least 5 minutes of continuous video and audio stream
 - Developed a geofence system design for the fixed wing VTOL
 - Built a fixed wing VTOL (vertical take-off and landing) unmanned aerial vehicle with postgraduate teammates (Mini Talon: <https://youtu.be/ELSqvWizsCc> , start from 00:57-01:50)
 - Designed the mechanical structure of UAVs
- Vice President (Executive), The Outstanding Teens Association Aug 2018 – Sep 2020
- Leading the team of Academic & Development Committee to plan and organize a Peer to Peer Programme (P2P X STEM) for all students in primary schools and secondary schools in Hong Kong
 - Contacting with other student leaders and teachers for promoting P2P X STEM
 - Sharing personal experience on STEM (robotics) in P2P X STEM
- Leader of the Team (Crimson), The Hong Kong Polytechnic University FENG Robotics Club Oct 2018 – Oct 2019
- Chief designer of Manual Robot 1 (A multi-tasking robot with several types of actuators)
 - Designer of the rack of compressed air tank for pneumatic cylinders
 - Won Best Engineering Award in the Robocon 2019 Hong Kong Contest

IT Skills

CAD: AutoCAD, Autodesk Inventor, CorelDraw, SolidWorks

Programming language: Arduino, C++, Python