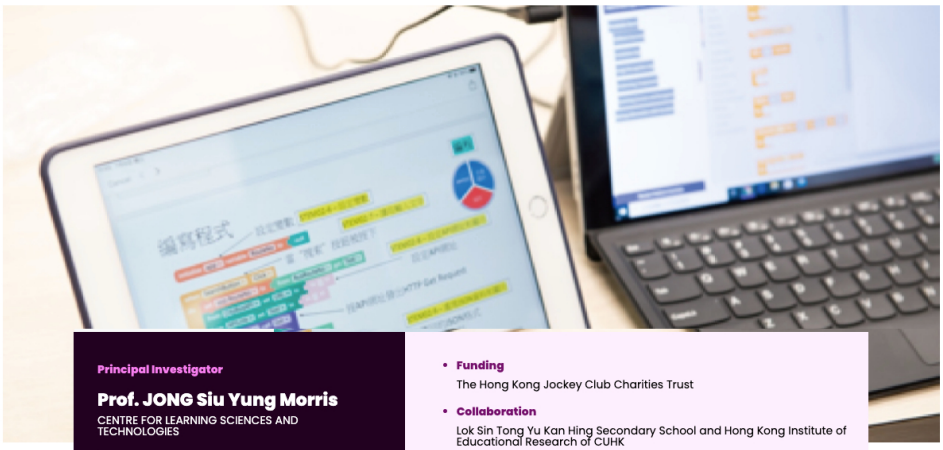
Jockey Club Community Care and STEM in Action Project

#2020 #Education



Principal Investigator

Prof. JONG Siu Yung Morris

CENTRE FOR LEARNING SCIENCES AND TECHNOLOGIES

- **Funding**
  The Hong Kong Jockey Club Charities Trust
- **Collaboration**
  Lok Sin Tong Yu Kan Hing Secondary School and Hong Kong Institute of Educational Research of CUHK

As STEM-related innovations become an integral part of the 21st Century, promoting the innovation and technology ecosystem via STEM education in secondary schools becomes a vital educational strategy. The Jockey Club Community Care and STEM in Action Project maximizes the opportunities of students and schools to apply the latest STEM knowledge and skills within the community. Besides, the project supports junior form students' creativity and innovative ideas and induces a sense of social responsibility via a quadripartite professional partnership among the university, schools, social service organizations and entrepreneurs in Hong Kong.

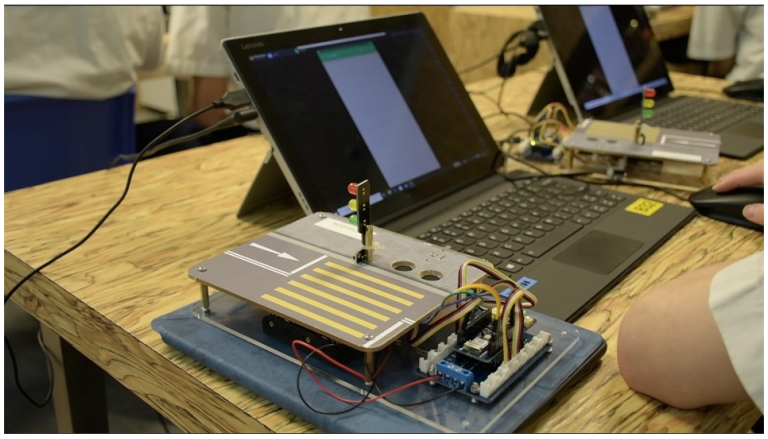
Interactions with socially disadvantaged elderly groups not only enables students to gain a deeper understanding of the actual livelihood needs of these groups, but further develop respect and care towards their elderly family members and the underprivileged within the community. The community beneficiaries will gain care and support when their daily practical issues are solved by our students' innovative ideas and STEM-related products. We hope that after students' involvements with this project, they will become inspired to continue innovating new products for the community in the future. Allowing secondary school students to access our university's innovative STEM resources help unleash their creativity. This also allows students to have an authentic learning platform and gain new insights into how technology can be deployed towards designing innovative products. Furthermore, the mentorship programme enables secondary school students to benefit from coaching and guidance by university undergraduate mentors who possess practical experience and tertiary-level knowledge in engineering.

Uniqueness and Competitive Advantages:

- Students could learn about the latest CAM/CAD technologies and production cycles in the commercial sector.
- By learning the IoT hardware development platform in our project, students gain practical skills and knowledge of the fast-paced 21st century's building blocks.
- Students will be equipped with technologically innovative skills and knowledge such as IFTTT, coding, and programming.
- Students could gain knowledge in 3D drawing and 3D printing, which enable students to transform their innovative STEM ideas into prototypes and products.

Students learn programming in the Project's curriculum of "STEM Education".

Students learn about barrier free facilities in our community for people with visual impairment in the Project's curriculum of "Social Service Education".



Through programming, students can read real-time data of smart traffic light model connecting to the Internet of Things (IoT).

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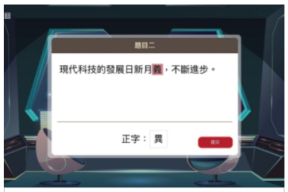

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