Gifted Education Fund: Off-school Advanced Learning Programmes

Programme No. 2021-01 (For primary students)

Title of Programme	**Mastering AI Skills through Gamification**
Programme Provider	Department of Computing & Decision Sciences, Lingnan University
Theme	STEM-related Mentorship Programme
Maximum No. of Participants and Class Level in the 2021/22 School Year	30 students (Primary 3-5)
Pre-requisite	Applicants should possess basic computer programming knowledge.
Programme Delivery Period	From Aug 2022 to April 2023 (9 months) (tentative)
Medium of Instruction	Course Material: English Class teaching/ Discussion: English supplemented with Cantonese
Objectives	• To equip gifted students with the knowledge and skills of developing Artificial Intelligence (AI) models through creative learning and teaching activities; • To develop students' hands on and minds-on coding abilities and problem-solving skills to implement AI projects in a gamified learning environment; and • To nurture positive values and attitudes among students such as perseverance to overcome adversities, willingness to collaborate and share with peers, etc.
Programme Outline*	This programme aims to equip gifted students at the primary level with the knowledge and skills of developing AI models, and develop problem-solving and critical thinking skills for personal growth and development. The programme consists of three phases. Phase I (16 hours in total; 9 sessions) • Students will learn how to 'train' a computer to recognise numbers, images, sounds and faces, and control a physical device. Students will work in groups and build different AI systems to tackle physical movement tasks. Each group will conduct a presentation on its AI system by the end of this phase. Phase II (12 hours in total; 7 sessions) • Students will be introduced five recognition systems (image, face, text, voice and age) with design, implementation and

	testing of the systems. By the end of this phase, students will work in groups and build recognition systems that can be applied in real life. Students will show their designs and creativity in a presentation. Phase III (12 hours in total; 7 sessions) • In this phase, students will learn basic Python coding technology and how to apply Python coding technology in conventional AI models. Students will build AI models in groups to distinguish images of pets and present their animal recognition systems to parents and other attendees during the showcase event by the end of the programme. * In view of the latest development of the COVID-19 pandemic, the programme provider may need to modify the learning and teaching activities as a contingency.
Admission Fee	Free of charge
Application method	Application form can be downloaded from the following webpage: https://www.edb.gov.hk/en/curriculum-development/curriculum-area/gifted/ge_fund/gef/programme/current.html Please complete the application form and send it by post on or before 16 May 2022 to the following address: Department of Computing and Decision Sciences SEK212/4 Simon and Eleanor Kwok Building Lingnan University Tuen Mun, New Territories (Attn: Prof. Eric SEE-TO Wing-kuen)
Documents to be submitted along with the application	• A photocopy of report card (last two academic years) • Evidence of Other Learning Experiences (if any)
Enquiry	Dr Emily WANG Xiaoxi (Department of Computing and Decision Sciences, Lingnan University) Tel No.: 6041 6117 (Dr WANG) Email: emilywang@ln.edu.hk
Date of Announcement of Result	By late June 2022 (tentative)