JUNIOR RESEARCHER MENTORING PROGRAMME 2022

Code:	JRMP2022_17
School / Department:	Department of Electronic and Information Engineering
Name of Research Leader:	Prof. Kenneth Lam, Professor
Research Topic:	Research and Development of an AI-based Object Detection and Tracking System
Short Description of the Research Project:	In this research project, participating students will first learn the basic concepts of artificial intelligence (AI) technology, including image processing, computer vision and pattern recognition, by attending lectures and tutorials. They will understand the basic structure of deep neural networks and how to train a network to perform object detection and classification. Having gained the knowledge and trained a deep neural network, students will deploy the deep network on a mobile robot equipped with a camera. Students will instruct the network on what object to recognize. The network will output the position of the recognized object accordingly. Then, students will develop a program to control the robot to follow the object. Students can learn current AI technology and programming skills through this project and exercise their creative thinking and technical skills to complete a computer-vision task.

No. of Places Offered:	4
Frequency of Meetings:	Bi-weekly
Special Requirement(s):	Computer programming experience (e.g. in C/C++, Python) would be an advantage but is not a must.

* The information presented above is subject to change.