



Clementi Town Secondary School

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Date: 27 June 2022

To: Hu Bowen
Through the Principal

Dear Bowen,

RE: Letter of Recognition for CTSS Integrated Computing Talent Development Project

This letter is to appreciate the excellent work that you and Aidan have put into your Computing Talent Development Project. You have worked proactively and tirelessly to identify a specific area of need by the school, whereby students spend a significant amount of their recess and lunch periods queuing up to purchase their food, and developed a canteen queue wait time estimator, through the use of OpenCV for image processing and the YOLOv5 vision model, to programme a Raspberry Pi microcontroller with a video camera attachment to identify the number of students in a queue. Information from the microcontroller would then be transmitted wirelessly to a server through socket programming and a client-server architecture, which allows an estimated queue time to be shown on a screen.

Your passion for Artificial Intelligence and programming and drive to succeed is strongly evident in Academic Year 2022. Prior to developing the canteen queue wait time estimator, you and Aidan have worked on the a car counting project, which utilises the YOLOv5 vision model and DeepSORT to programme a Raspberry Pi microcontroller with a video camera attachment to track and count the number of vehicles entering the expressway outside our school. This project would enable our lower secondary students to experience applying data handling to solve a real-world context problem in an authentic manner, as part of the School's Applied Learning Programme.

Thank you for your hard and heart work and may you continue to Aspire and Grow for many years to come!

Yours sincerely,

Mr Kamal Bin Yacob

Subject Head

Information and Communications Technology

Clementi Town Secondary School