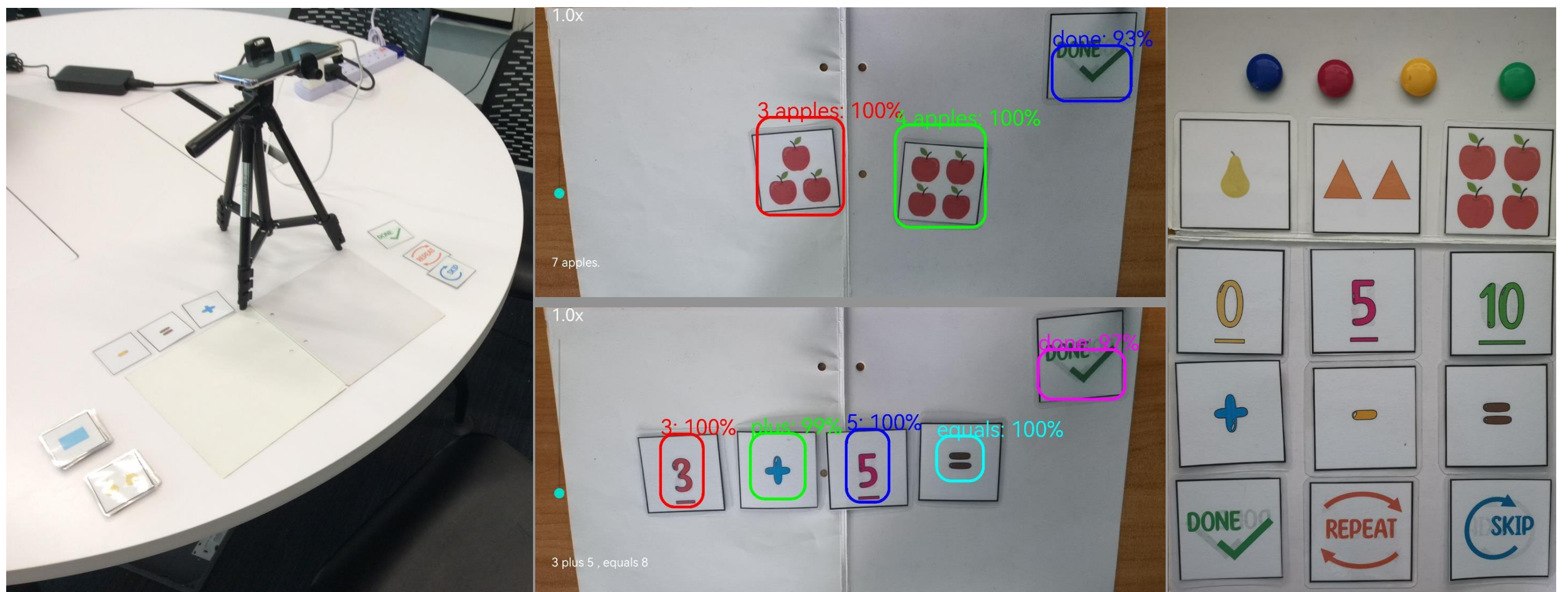


Vision-Based Tangible Maths Tutor

Interactive Education Technology

Student: Toh Jun Wei

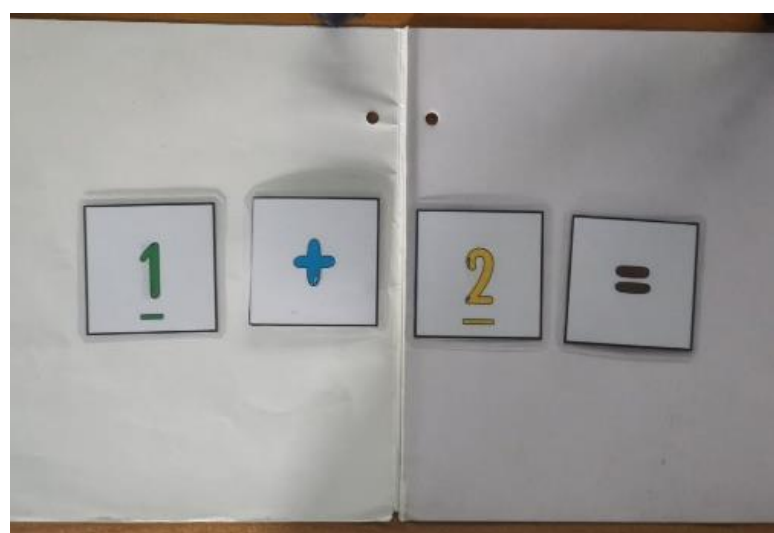
Supervisor: Dr. Goh Wooi Boon



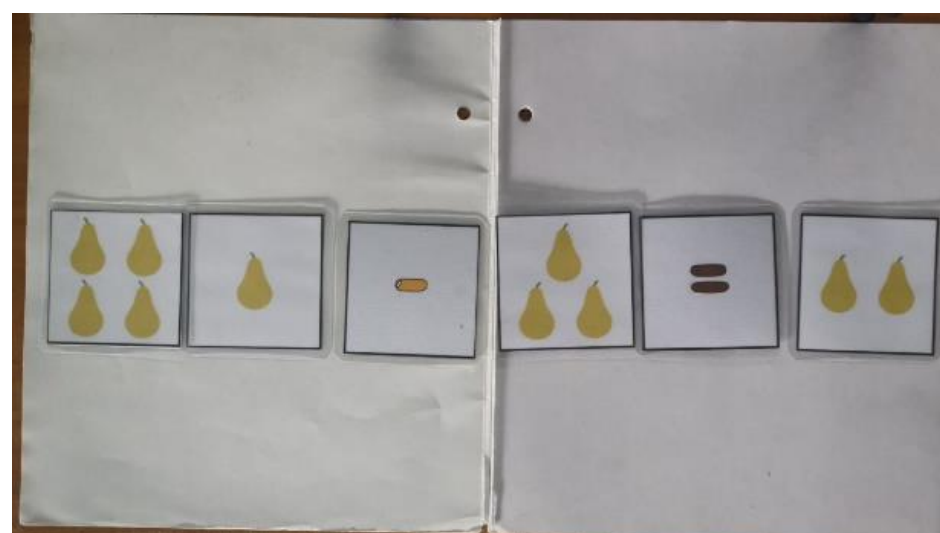
Project Objectives:

This project aimed to explore the use of object detection in the early childhood education domain. This was done through the development of the Vision-Based Tangible Maths Tutor system – a mobile-based learning system that allows young children to learn mathematics using a combination of digital and tactile learning. By placing tangible manipulatives into a work area, the system would detect how they were arranged and provide feedback using audio.

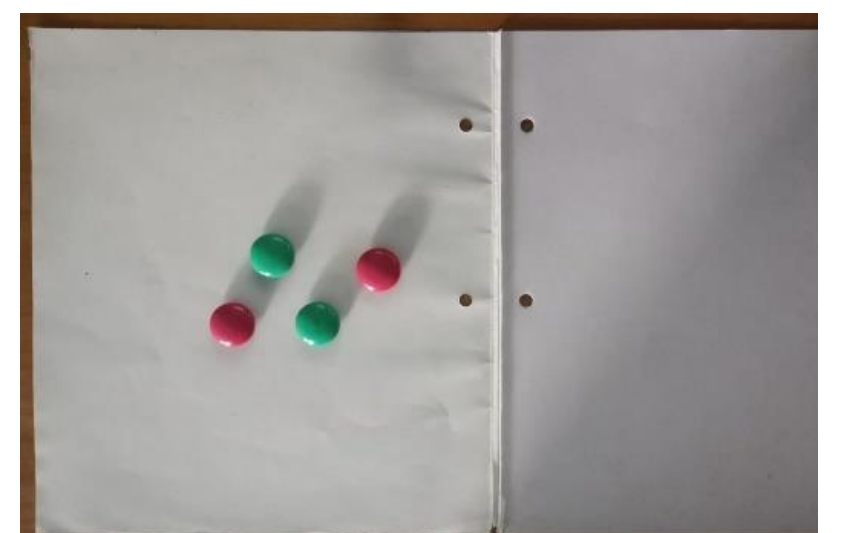
Examples:



🔊 "1 plus 2 equals 3"



🔊 "5 pears minus 3 pears is equals to 2 pears. Good job!"



🔊 "There is an equal number of red buttons and green buttons."