Interactive Mobile Application for Initial Skills Development of Primary Students in Sri Lanka

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Abstract

In many cases, children between this age are using smartphones and other technology devices, to play games, watch cartoons, take photos and sometimes the chance is getting higher than we think that children access unnecessary contents due to lack of guidance and unawareness of parents. This interactive mobile application is used as an adaptive learning tool for the primary school students. Utilizing children's comfort with technology allows for the development of their talents. In math skills development, some attractively designed gamified activities to solve basic math questions are given according to the skill level the child is currently in. The accuracy was much higher in the CNN approach as it was recorded as 0.9919. In environmental skills development component, the app will ask child to identify the surroundings according to a flow, starting from the house and towards the garden using object detection and the results were detected with a higher accuracy level around 0.9-0.99 after training the ML model. And in the language skills development component the child is given activities to develop pronunciation skills using audio processing and finally the verification of online achievements of a child by NFT technology, is fulfilled via the app.

Keywords

Adaptive learning, gamified activities, object detection, audio processing, NFT technology, Machine Learning