
Sinhala Language-Based Personal Assistant Robot Software for Elderly People

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A B S T R A C T

Most elderly people require special care to live a healthy life free of anxieties and distress. The elderly are abused by their family members due to a lack of information about their changing behavioural patterns at home. A personal assistant for the elderly is a great way to provide help where it is needed, while still allowing the elderly person to preserve their freedom and independence in other areas. However, humans-based personal assistants are not available today, because most of them are not interested in taking care of unknown elderly people. Moreover, humans-based personal assistance services are very costly and insecure. Therefore, the elderly may require the services of a robot as a personal assistant, which can assist them in a precise way. In Sri Lanka, due to the language barriers, most elderly people need Sinhala language-based robots as personal assistants. This research proposes software of Sinhala language-based robot personal assistant. This can fill the gap created by the existence of only English language-based robots with the Sinhala language-based personal assistant in an efficient way. Thus, the objective of this research is to communicate with the elderly as personal assistants by using the Sinhala language. The proposed application was developed using artificial intelligence-based algorithms. The accuracy of the system was calculated against the training test cases and found to be above 70%. In conclusion, the developed robotic software can help elderly people as personal assistants in Sri Lanka safely and cheaply.

Keywords: artificial intelligence, elderly people personal assistant robot, Sinhala language

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