



Development of AI-based fall prevention models from the perspective of artificial intelligence in healthcare

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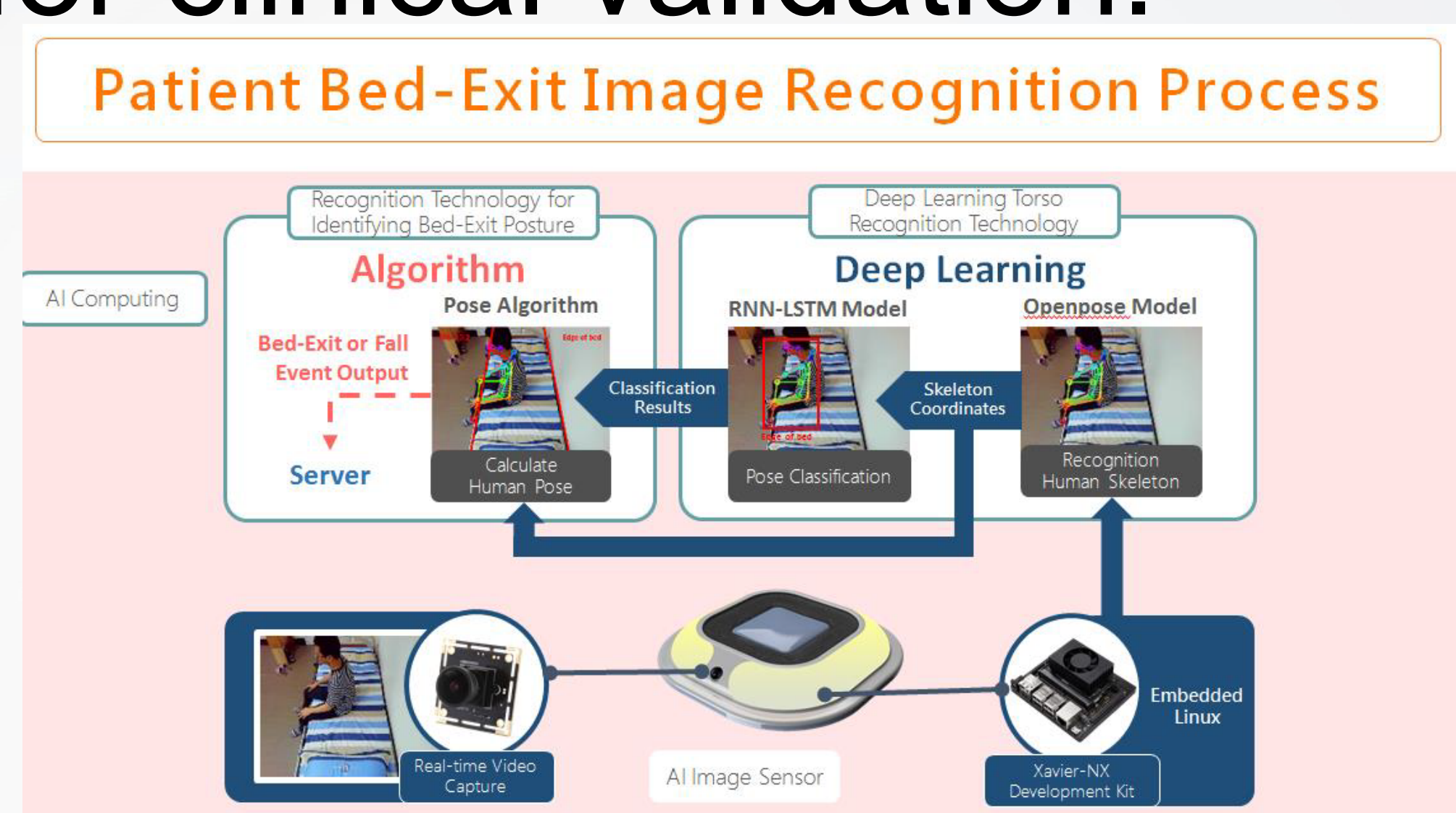
Objective

To examine the current state of fall prevention through the integration of artificial intelligence (AI) technology and the deployment of “Intelligent Fall-Prevention Lighting and Alert Systems” in healthcare settings.



Methods

This research entailed developing an AI algorithm for human skeletal image recognition and establishing a workflow for bed-exit alert software, which were then incorporated into a holistic AI-based fall prevention framework for clinical validation.



Results

The project successfully developed an AI algorithm for human skeletal image recognition and established a workflow for bed-exit warning software. The preliminary validation of the fall-prevention lighting system achieved a detection accuracy rate of up to 90%.

Conclusion



The application of AI for bed-exit alerts and patient recognition marks an innovative step in fall prevention strategies. The use of AI technology in clinical care settings is an anticipated future trend, which has the potential to improve the quality of care. However, as AI technology rapidly evolves, continuous validation and enhancement of accuracy in the complex environment of clinical care remain challenging and necessitate ongoing effort.

Keywords: bedside falls, intelligent fall prevention system, artificial intelligence

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