

The Vision of Integrating Artificial Intelligence in Health-Care

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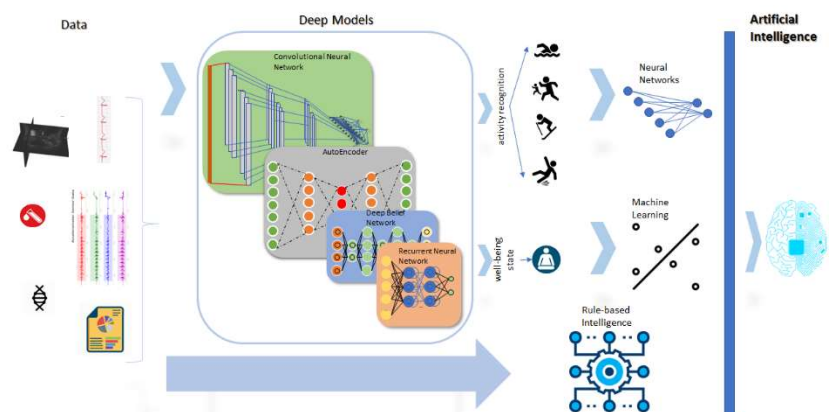
ABSTRACT

The development of Artificial Intelligence (AI) in the medical environment will introduce innovations that connect the expert clinician with a continuously and constantly monitoring process of patients throughout the medical infrastructure. The processing of the recorded bio-signals, imaging data and clinical information will be correlated with the AI's experience from millions of similar retrospective cases providing suggestive therapeutic actions, alerts on health status changes and diagnosis predictions. This uninterrupted supervision improves the risk identification of emergency incidents comparable to experienced clinicians by analyzing patient health status and objective medical data.

The fully-automated diagnosis assisted by the well-being state with stress indicator, emotional state or social activities and objective medical data can provide insights for decision making process from a personalized medicine stand point. In particular, objective stress detection can be a challenging task due to the large number of dependent variables and its subjective nature in terms of experiences of an individual. Novel deep architectures [1] can assist to accurately predict the emotional state of the examined subject.

The variety of medical imaging data included in the clinical practice contributes to the diagnostic value of patient's condition. Difficult tasks such as classification of the cancer tissue type [2] in functional organs with non-invasive methods can spare patients of unnecessary surgical procedures and inefficient treatments.

The vision of Artificial Intelligence integration in health care environments will increase the productivity within the medical community and provide objective diagnosis with specific treatment to patients.



REFERENCES

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