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Framework for an Integrated Ehealth Platform with Smart Diagnostic Engine for Improved Healthcare Access for Rural Dwellers

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Abstract

The healthcare challenges faced by rural dwellers in developing nations, especially those in the African continent include a lack of sufficient workforce, especially doctors, lack of healthcare facilities and access to the required medications. This paper presents a framework for the development of an integrated Ehealth platform which will provide the rural dwellers with access to high-quality medical personnel located in the urban areas. The unique advantages of this platform range from the inclusion of reputable pharmacies and medical diagnostic labs to minimize the risk of fake drugs and wrong diagnostic results coupled with integrated drug delivery and sample collection system which can be implemented using taxis, motorbikes or drones. The system also incorporates an Artificial Intelligence-based disease diagnostic engine which is designed to learn continuously from the patient/doctor interactions and support the doctor in the patient diagnosis. This system presents a robust solution for providing rural dwellers with access to qualified medical service and also enable the doctors to prescribe high-quality drugs from reputable pharmacies close to the patient for the patient's use. Governments and donor agencies can utilize this platform to provide and pay for quality medical service to rural areas while at the same time, being able to track the spread of diseases.

Keywords

Ehealth Automated Disease Diagnosis Artificial Intelligence

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