"AI Machine Learning in Predicting At Risk Patients"

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Introduction

Technology today is changing right before our eyes, from altering the way people live, work, and interact with one another and continually transforming the world around us. The best known example of this is the new technological advancements in the Fourth Industrial Revolution (4IR). Big data, Robotics, 3D printing, Internet of Things (IoT), and Artificial Intelligence (AI) are the technologies leading the 4IR. These technologies are taking the world by a storm. Artificial intelligence (AI) is increasing its change across all industries. Health care, in particular, is ripe for AI innovation and this will impact our daily lives and also economic development. It focuses on how computers learn from data and doing human-like thought processes and provides decision support system that are transforming the future of health care. AI-powered predictive system are helping to reduce wait times, improve staff workflows. This not only improves health outcomes, while enabling the system to be financially sustainable. The term "Prediction” in AI refers to the output of an algorithm after it has been trained on a historical dataset and applied to new data when forecasting a particular outcome. When applied to Machine learning, it can make highly accurate guesses as to the likely outcomes of a question based on historical data, which can be about all kinds of things. The most successful type of AI in the past years has been Machine-learning. Its approach, instead of following pre-programmed instructions, machine-learning allows systems to find patterns and derived its own rule. Many countries is currently facing the challenges in health care, including limited service access and unbalanced distribution of medical resources. This is where AI takes place to help.

AI can be a tool to handle global healthcare challenges and providing improvement in inclusive services to the general public. The impact of AI technologies in health care are continue to rise, from medical imaging analysis, assisted clinical decision-making to more efficient diagnosis and treatments. Associate director of digital strategy at NHS Somerset Clinical Commissioning Group, Allison Nation. She believes the AI can be a tool to help and transform healthcare provision.

AI Machine Learning is being used for a range of healthcare and research purposes, including detection of disease, that this paper will be focusing. A tool to help healthcare practitioners accurately predict whether a patient may at risk and require emergency care in the near future. The AI tool that analyze data in the form of a complexity score that is based on a percentage scale. The score is connected to identify health conditions with a range of contributory factors, such as high blood pressure or a history of smoking. This paper will also address ethical issues like: the potential for AI to make incorrect decisions; the question of who is responsible when AI is used to support decision-making; difficulties in validating the outputs of AI systems; ensuring the protection of potentially sensitive data and securing public trust in the development.