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Connected Care and Deep Learning-Based Medical Diagnosis System

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Abstract

The COVID-19 outbreak has put humanity in an unprecedented terrible situation, putting life on halt and taking millions of lives. The Coronavirus has infested 212 countries and territories, increasing the number of infected cases and fatalities.

Researchers dedicated their time and resources to fight this deadly virus on several fronts. Without question, Machine Learning and IoT provide a potential solution for advanced electronic health records (EHR) and care systems that decrease the heavy burden on doctors, automate repetitive operations, and protect people from this pandemic. We created DeepCare, a cloud-native platform for monitoring and managing a medical facility based on IoT devices and powered by COVIXNet, a deep learning network to diagnose COVID-19 from X-Ray radiographs. We also present the COVIXSet dataset that we used to train our model.