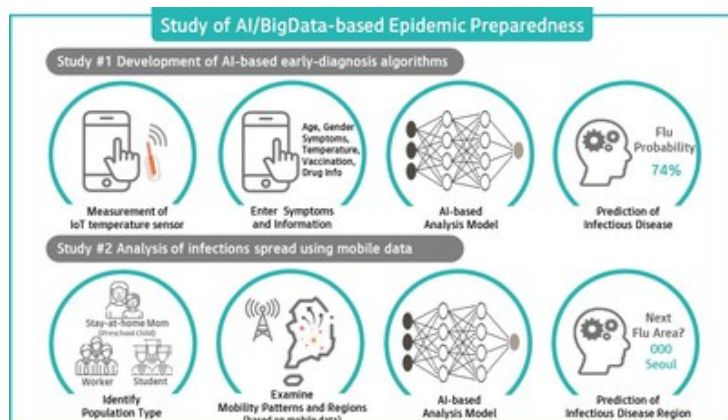# South Korea to conduct study on epidemic preparedness

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Early-Diagnosis, Predictions on Infection Spread Using Big Data and AI

KT Corporation, South Korea's largest telecommunications company, announced a three-year research study today funded by the Bill & Melinda Gates Foundation for ICT-based global epidemic response using artificial intelligence (AI) and Big Data.

The 10-million-dollar project stems from the recognition of South Korea's advanced information and communication technology (ICT) as well as its proven ability to cope with the ongoing coronavirus pandemic.

The three-year research collaboration builds off discussions between the Gates Foundation and KT in 2019 and the research will be conducted in South Korea, which possesses a high mobile phone penetration rate and 5G infrastructure.

With Gates Foundation grant funding, KT will develop Big Data algorithms to improve early-diagnosis based on AI during an epidemic and prediction of viral infections spread using mobile data. Research expenses will be divided equally between the two organizations.

The project calls for KT to first develop a mobile app to automatically input symptoms typically associated with viral infections. An Internet of Things (IoT) body temperature sensor will be among the tools. Symptoms and body temperature will be analyzed with AI to create an algorithm that will calculate the probability of infection.

KT will also use mobile data to examine human mobility patterns and regions with epidemics to determine the direction of the infection spread. At the same time, it will analyze virus trends by region and develop forecasting models to predict seasonal outbreak for each region.