

# A Real-time Deep Transfer Learning Model for Facial Mask Detection

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## Abstract

With the rise of COVID-19, wearing masks in public areas has become paramount to preventing the transmission of the coronavirus. Furthermore, many public service providers may require customers to properly wear masks in order to be served. But current enforcement measures of mask mandates are mostly monitored by humans, and thus may be hard to execute effectively in densely populated and fast-moving venues like airports and public transit. An automated mask detection monitoring system could greatly reduce the required human labor. In this study, a facial mask detection software model, usable in existing surveillance applications such as airport monitoring systems, is developed using Keras, a high-level deep

As more countries are developing mask wearing regulations, automated masked face detection is a key real-world application [3]. Transportation systems are one area that have been considerably affected by the pandemic, as cities around the world had to enforce massive restrictions on public transport in order to limit transmission of the virus and ensure the safe passage of key workers during the emergency response [4]. Masks have since been required on planes, buses, trains, and other forms of public transportation traveling into, transportation hubs such as airports and stations [5].