

# Covid-19 Digital Medical Passport using Blockchain Technology

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**Abstract:** COVID-19 has emerged as a highly infectious illness that has had a worldwide effect, resulting in a significant number of infections and fatalities. Testing is critical to a successful response to this pandemic because it helps detect illnesses and therefore attenuate (isolate/cure) them. We will look at this issue and contribution in this study by providing a block chain-based solution that includes self-sovereign identity and decentralized storage. For COVID-19 test takers, our solution includes digital medical passports and immunity certificates. We will demonstrate smart contracts based on the block chain and implemented in Python to preserve a digital medical identity for test-takers, allowing for a quick and trustworthy response from the appropriate medical authorities. We will use immutable trustworthy block chain to decrease medical facility response times, relieve the dissemination of incorrect information, and stop the transmission of illness via digital medical passports.

**Keywords:** Digital medical passports, Immunity certificates, Block chain, Elliptic Curve Digital Signature Algorithm (ECDSA), etc.

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