Pandemic-Resilient ATM: Enabling Contactless and Card less Transactions using Computer Vision

In recent years, Significant advancements in Science and Technology have paved the way for the emergence of hand gesture recognition technology and its diverse applications. This innovative technology has rapidly established itself as a powerful asset in the ongoing battle against the transmission of infectious diseases, with the potential to mitigate the impact of future pandemics that could affect various industries, including banking.

Within the framework of our research, we present a groundbreaking model designed to harness the capabilities of Touchless and Cardless ATMs, thereby providing a secure and seamless financial services experience by avoiding practices like Card Skimming. Our approach introduces a novel use of ATM cameras for hand tracing and detection, employing a sophisticated computer vision model to precisely analyses the intricate motions of an individual's hand. This process serves the dual purpose of identity validation in real-time and the reduction of physical contact, thus not only revolutionizing banking practices but also making substantial contributions to public health measures amid pandemics and beyond.