Informatics Institute of Technology
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Video Surveillance Monitoring System

Final Project Report

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Abstract

Due to the present state of the economy, society, and other factors, parents all over the globe are finding themselves in more challenging positions due to their increasingly packed schedules. Even though this is one of the primary reasons parents choose to have their children attend daycare, we have reached a stage where there is a legitimate concern over the safety of children. This has direct repercussions for children's well-being and safety. We have developed an appropriate method that uses facial biometrics to monitor the emotional states of youngsters to bridge the communication gap between parents and their offspring.

This study proposes an innovative method for analyzing sentiment based on facial biometrics recognition, including identifying abusive behaviour and anomalous activity. Following a comprehensive analysis of the previously conducted research, we settled on the xcemption, CNN, and mobile net models. We were able to develop an application that satisfies our requirements for more precision by adding only a few more levels of alterations. In addition, we have validated the program by testing it against real-world situations and datasets we developed ourselves. We used already developed solutions such as VGG16, sequential models, and many more when doing our assessments.

Keywords: Surveillance Monitoring, Children Monitoring, Algorithm selection, Python