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Smart Intelligent System for Cervix Cancer Image Classification Using Google Cloud Platform

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Abstract

tools for disease diagnosis, health monitoring, information pooling of patient records, identifying medical patterns, clinical decision making, forecasting medical trends or complications, drug discovery, recommend medical practices, delivering rehabilitation therapy, personalized and patient centric medication. The evolution of digital technologies, intelligent systems and smart devices empowered healthcare supports sustainable smart city development. In this work, a smart intelligent system is proposed for the staging classification of cervical cancer images by applying Automated Machine Learning (AutoML) using Google Cloud Platform (GCP). The description of the proposed system pipeline is given as follows. (1) Real time cervical cancer images from EVA digital colposcopy are collected from Kaggle site. These raw datasets are utilized to construct the proposed system, (2) The different stages of cervical cancer images are prepared, labelled and then uploaded into GCP environment, (3) A smart intelligent system is constructed using AutoML framework to categorize the stages of cervical cancer, and (4) The developed

involvement of taking biopsy and earlier detection of precancerous lesions.

Keywords

AutoML **Cervical cancer** **GCP**

Smart healthcare **Vertex AI**

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