LabTracker: Navigating Laboratory Test Results with Ease and Understanding

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Abstract
Laboratory test results can be challenging to interpret, which is a big problem for the great majority of the population. In the usual laboratory tests, the patient can find abbreviations of tests performed and a lot of medical terms that are hard to understand. The proposed system's objective is to help patients understand laboratory test results and keep track of their health. To achieve this, we developed an application that can scan a laboratory test result using a pre-trained Convolutional Neural Network-based Optical Character Recognition tool (OCR) in order to extract the data. The application translates the abbreviations of each test performed and stores the processed data locally. The application also provides explanations for each test's normal range, making it easier for patients to understand their results. Additionally, the application's data visualization feature enables patients to track their progress over time and make informed decisions regarding their health. With the ability to share results with healthcare providers, patients can receive professional medical advice and treatment based on their test results. The application's adaptability is a key strength. It can effectively handle different types of laboratory tests from various medical institutions, regardless of the analysis methods used. This ensures a comprehensive and reliable health-tracking experience for the user.

Keywords: Laboratory tests results; Abbreviations and medical terms; Data visualization; Optical Character Recognition (OCR)