Liver Disease Artificial Intelligence Diagnosis through Fingernails

Al-Fawara, Suhaib (School: Jubilee School)
Ghanem, Mohammad (School: Jubilee School)

According to the journal of Hepatology Liver disease accounts for approximately 2 million deaths per year worldwide in 2018, numbers are continuing to rise by around 5 % each year, almost all these deaths could be avoided through earlier diagnosis. This work will investigate the possibility of detecting Liver disease from images of fingernails, processed using artificial intelligence in a mobile app. as Fingernails possesses clear connections and shares various symptoms directly and indirectly correlated to malfunction in the liver. The study methodology contained two main phases. First, collecting images to train an artificial intelligence for symptoms on nails correlated with Liver disease, and developing an app. Second, testing the app on the public to make additional adjustments to the design and functionality of the app. The app will determine whether the patient has Liver disease, based on the difference between each reading for each condition and the average (the closer, the better). There was a correlation between the readings of the artificial intelligence and the ground truth of the patient (whether the patient has Liver disease). Moreover, the app proved accurate and agile, the application was tested on subjects with Liver disease and subjects without Liver disease. The results showed an efficiency of 80%. Concluding, this app seems to provide a non-invasive, safe, and affordable measure to detect Liver disease.

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