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Development of Smartphone-based malaria detection system

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To combat malaria, we have developed a diagnostic system using smartphone. Our approach for detecting malaria is based on a smartphone with a 32MP front-facing camera, a 100x phone camera lens, and a custom-written application that makes use of Python's powerful image libraries. The enhanced characteristics of smartphones, such as high-resolution cameras, have made it simple to design a cost-effective malaria detection system. Moreover, a sizable population is already familiar with them and able to buy smartphones. Malaria control in low-resource settings has been difficult because of the high price of malaria-detecting tools. Tools that may be utilized to prevent or reduce Malaria's prevalence are urgently needed. In order to successfully battle Malaria in these far-flung locations and third-world countries, especially in Sub-Saharan Africa, where it is most widespread, we need a low-cost, easier, and quicker technique of malaria identification. Images of the blood sample were captured with the help of the Smartphone and its camera lens and then processed by our software. Based on the final picture, samples were labeled as affirmative or negative. Pictures generated from blood samples positive for Malaria showed ring-shaped structures, whereas images generated from blood samples negative for Malaria showed no structures at all.

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