

Australia designs imaging software to accurately diagnose jaundice

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Diagnosing jaundice in the blink of an eye from a digital camera



Engineers from the University of South Australia and Middle Technical University have designed imaging software that can accurately diagnose jaundice in the blink of an eye, automatically turn on a blue LED light to counteract it and send the diagnosis in an SMS to the carer.

UniSA remote sensing engineer Professor Javaan Chahl says jaundice is particularly prevalent in developing countries where there often isn't the equipment or trained medical staff to effectively treat it.

"Using image processing techniques extracted from data captured by the camera, we can cheaply and accurately screen newborns for jaundice in a non-invasive way, before taking a blood test," Prof Chahl says.

"When the bilirubin levels reach a certain threshold, a microcontroller triggers blue LED phototherapy and sends details to a mobile phone.

"This can be done in one second, literally, which can make all the difference in severe cases, where brain damage and hearing loss can result if treatment is not administered quickly."