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App that knows a fake medicine when it 'sees' it

By Kumaran P, Bangalore Mirror Bureau ǀ Updated: Apr 2, 2018, 04.00 AM IST

Three engineering students from city are developing an app that looks to end the menace of counterfeit drugs

Three engineering students from the city are working on an application that can help people make informed decision at their local pharmacy. Called DrugSafe, the app helps detect counterfeit by doing three basic checks with the parameters of the original drug. After a brief pilot run involving about 150 people, the trio hopes to make it available online in the near future, and to also submitting it as an entry for the Imagine Cup, a worldwide competition held by Microsoft.

According to surveys by the Central Drug Standard Control Organization (CDSCO) and World Health Organization (WHO), about 40 per cent of drugs in the Indian market are substandard and result in the loss of thousands of lives.

The three students from RV College of Engineering (RVCE) – Pratik Mohapatra, Srihari HS, and Chidroop, all in their second year of Computer Science – have been working with leading pharmaceutical companies to get the parameters with which to detect original drugs, and which they have now incorporated in their application.

Pratik told BM: "In our own community, one of our close friends was diagnosed with liver issues and we were shocked and pained to learn that this whole matter was caused by counterfeit drugs." That led the students to work on the idea.

Pratik says that the Rs 4,000-crore counterfeit drug market is leading to "healthcare failures, antibiotic resistance and the spread of disease within communities, besides deaths or additional illnesses".

Drugsafe helps consumers identify fake drugs. "The app lets you take a photo and perform three important checks to verify if the drug is original or not," he says.

HOW DOES IT WORK?

Elaborating on these three checks, Pratik says: "The first check is to compare the color of the back of the medicine with the original. Usually, there is a colour difference as counterfeit drugs are not printed by commercial printers. In the second check, the blueprint of the drug is compared. Most people do not look at the ingredients or content of the medicine. So that is compared with the original one."

"The third check is location. This is an important pointer. A medicine that was supposed to go to Bengaluru but was being bought in Kolkata can be suspected to be a counterfeit," he added.

WHO WILL BENEFIT?

Anyone with a smartphone can benefit from the app, according to the students.

"Druggists, hospitals and everyday people are all our target customers. We are looking at publishing it on app stores. Now, smartphones without a camera can also use this by just uploading the picture," they told BM.

WHAT'S NEXT?

The three are currently working hard to show the app at the Microsoft Imagine Cup, which will be held in April. The global competition takes entries from the next generation of computer science students.

"We are also planning to launch this app as a Progressive Web Application so that one doesn't exactly need to install the app. They can just log onto the site, upload the picture and scan it. In addition to this, we will also be integrating it with several bot channels so that a person without the facility of a smartphone will also be able to verify the drug. That is the power of AI," they told Bangalore Mirror.