## Measuring the size of objects (and saving lives) with OpenCV [Day 6 of 17]

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附件:

You and I, we're human.

Which, most of the time is great — opposable thumbs are a serious benefit, for example — but the old phrase "to err is human" has a lot of truth in it. We *definitely* make our share of mistakes — and we have a *very* human tendency to forget things, like anniversaries, directions, and what we were supposed to pick up at the store.

Fortunately, computer vision can help us pick up some of the slack.

For example, if I were to go into your medicine cabinet, gather up all the pills I could find, and then dump them all on your kitchen table (I would *never* do such a thing), you would likely have a problem re-sorting those pills and identifying the one which would cure the throbbing headache I'd just caused you.

Worse, 3.3 *million* injuries and deaths each year take place when people take the wrong medication — which results in *billions* of dollars in hospital bills and insurance claims.

Computer vision can help solve this problem though...

If you can compute the *size* a pill, you've taken the first step towards correctly *identifying* it:



Here's another scenario: if you're looking at a collection of cells under a microscope, you may not be able to immediately determine the size of the various individual cells. In fact, it can take trained pathologists *hours* to manually analyze images — but the same task can be accomplished *in just seconds* with computer vision-enabled software.

You can easily use OpenCV to measure the sizes of objects in an image — and then use that data to inform all kinds of analyses and decisions.

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Chief PylmageSearcher

P.S. By the way, you've completed *over a third* of this crash course already, which is pretty awesome. If you're interested in speeding up your learning curve so that you can get to the *really* cool stuff even faster, <u>I have something that might help</u> — and I'll tell you more about it tomorrow.

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