

DEBUGGING ZEN

BEN RAMSEY





Mobile-first

first time, it doesn't seem

Iterative & D

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NOT ZEND!

with busi

Build for 3rd



HI, I'M BEN.

I'm a web craftsman, author, and speaker. I build a platform for professional photographers at ShootProof. I enjoy APIs, open source software, organizing user groups, good beer, and spending time with my family. Nashville, TN is my home.

- ✿ Books
 - ✿ *php | architect's Zend PHP 5 Certification Study Guide*
 - ✿ *PHP5 Unleashed*
- ✿ Nashville PHP & Atlanta PHP
- ✿ `array_column()`
- ✿ Rhumsaa\Uuid library
- ✿ virtPHP
- ✿ PHP League OAuth 2.0 Client
- ✿ Nashville Code User Group Leadership

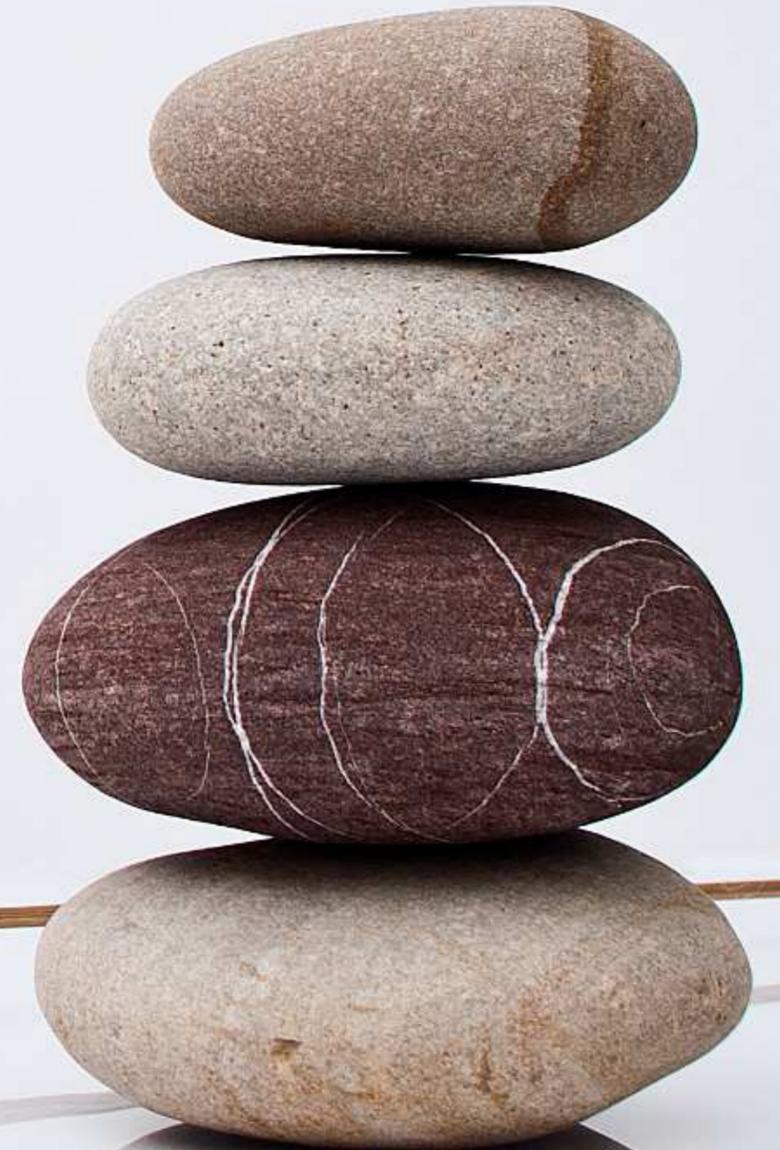
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We're hiring.

DEBUGGING ZEN



DEBUGGING



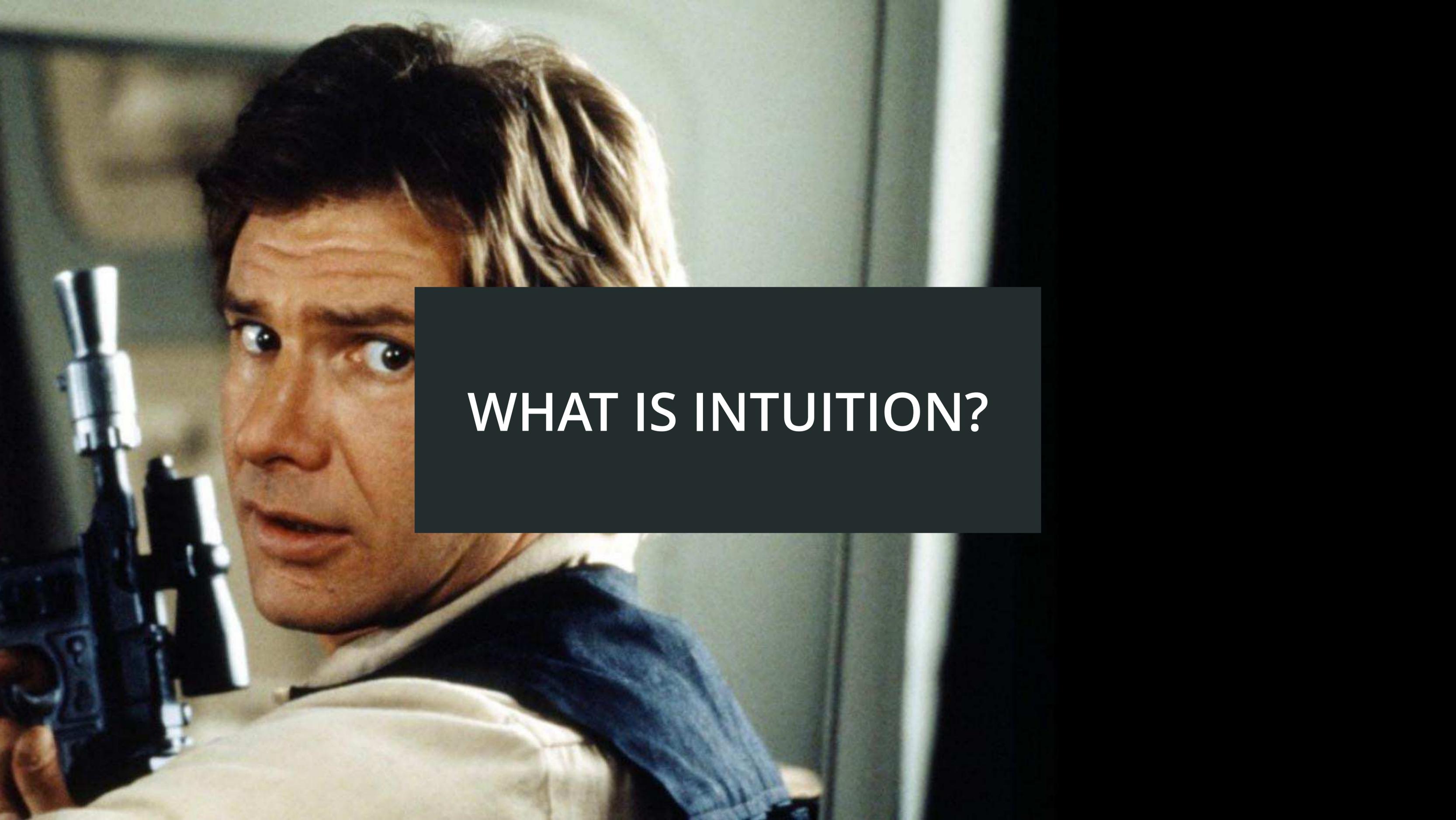


ZEN

ZEN /zɛn/

(colloquial) Extremely relaxed and collected.²

(informal) A philosophy of calm, reminiscent of that of the Buddhist denomination.³



WHAT IS INTUITION?



“Hokey religions and ancient weapons are no match for a good blaster at your side, kid.”
—Han Solo

IN·SIGHT /'ɪNSaɪt/

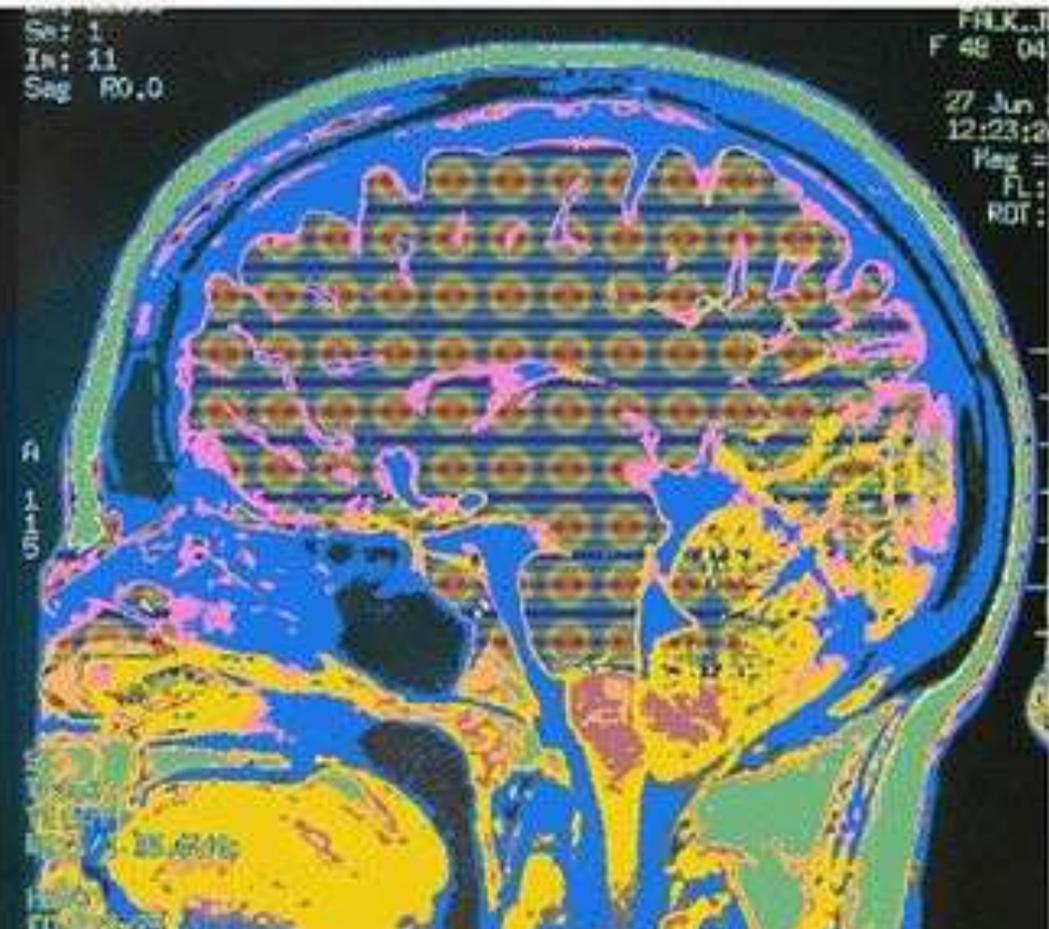
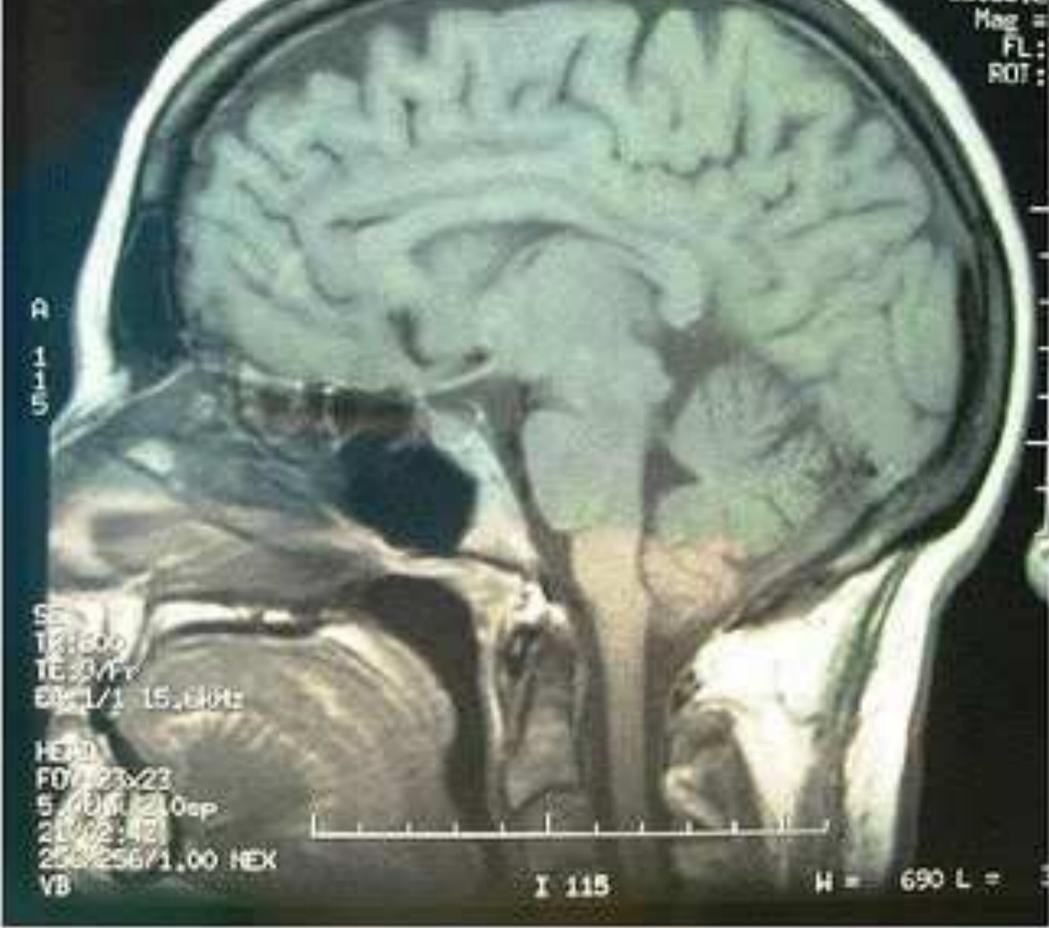
The capacity to gain accurate and deep understanding of a problem. It is often associated with movement beyond existing paradigms.⁵





That's immediate cognition, and you weren't conscious of any rational process being used.

“While intuition is associated with a single iterative stage, insight is characterized by the four progressive stages of preparation, incubation, insight and elaboration. Functionally and neurally, intuition is closely associated with the development of expertise, heuristics and affective gists during the preparation and incubation stages. The caudate and the orbitofrontal cortex are likely the means through which the two functional neuroanatomical systems interface and computationally interact. Moreover, it appears that ***intuition usurps declarative knowledge systems once implicit understandings become routinized and automatic*** via the striatum.”⁵





USING YOUR INTUITION

We can learn to develop it, listen to it, and, along with analytical thinking, make it a part of our standard thought processes.

A black and white photograph of water ripples. The image shows several concentric circles of ripples spreading out from points of impact on the water's surface. The lighting creates highlights and shadows on the ripples, giving them a three-dimensional appearance. In the center of the image, there is a dark grey rectangular box with the text "SLOW DOWN" written in white, bold, uppercase letters.

SLOW DOWN



- ❖ Stop what you're doing
- ❖ Close your eyes
- ❖ Take a deep breath
- ❖ Let it out slowly

“If you just sit and observe, you will see how restless your mind is. If you try to calm it, it only makes it worse, but over time it does calm, and when it does, there’s room to hear more subtle things—that’s when your intuition starts to blossom and you start to see things more clearly and be in the present more...”



"...Your mind just slows down, and you see a tremendous expanse in the moment. You see so much more than you could see before. It's a discipline; you have to practice it."⁶





**STOP STAYING
"I DON'T KNOW"**

Ask yourself what may be blocking you from finding the solution.

A landscape photograph of a mountain range at sunset or sunrise. The sky is a gradient of dark blue on the left to bright yellow on the right. The mountains are silhouetted against the bright sky, with some peaks catching the low light. A dark rectangular box is centered in the upper half of the image, containing white text.

**THE PROBLEM IS IN
YOUR CODE**

bugs.php.net



php.net | support | documentation | report a bug | advanced search | search howto | statistics | random bug | login

go to bug id or search bugs for

PHP Bug Tracking System

Before you report a bug, please make sure you have completed the following steps:

- Used the form above or our [advanced search page](#) to make sure nobody has reported the bug already.
- Made sure you are using the latest stable version or a build from Git, if similar bugs have recently been fixed and committed. You can download snapshots at <http://snaps.php.net>
- Read our tips on [how to report a bug that someone will want to help fix](#).
- See how to get a backtrace in case of a crash: [for *NIX](#) and [for Windows](#).
- Make sure it isn't a support question. For support, see the [support page](#).

Once you've double-checked that the bug you've found hasn't already been reported, and that you have collected all the information you need to file an excellent bug report, you can do so on our [bug reporting page](#).

Search the Bug System

You can search all of the bugs that have been reported on our [advanced search page](#), or use the form at the top of the page for a basic default search. Read the [search howto](#) for instructions on how search works.

If you have 10 minutes to kill and you want to help us out, grab a random open bug and see if you can help resolve it. We have made it easy. Hit <https://bugs.php.net/random> to go directly to a random open bug.

Common searches

- [Most recent open bugs \(all\)](#)
- [Most recent open bugs \(all\) with patch or pull request](#)
- [Most recent open bugs \(PHP 5.4\)](#)
- [Most recent open bugs \(PHP 5.5\)](#)
- [Most recent open bugs \(PHP 5.6\)](#)
- [Open Documentation bugs](#)
- [Open Documentation bugs \(with patches\)](#)

Bug System Statistics

You can view a variety of statistics about the bugs that have been reported on our [bug statistics page](#).

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- ❖ Looking in the wrong place
- ❖ Wasting time, energy, and resources
- ❖ Hurting your reputation as a problem solver

First, assume the problem is in *your* code.

A close-up photograph of a lavender flower spike on the left side of the frame. The background is a soft-focus field of more lavender flowers, creating a bokeh effect. A black rectangular box is centered horizontally and vertically, containing white text.

**FOCUS ON THE PROBLEM,
NOT A SOLUTION**

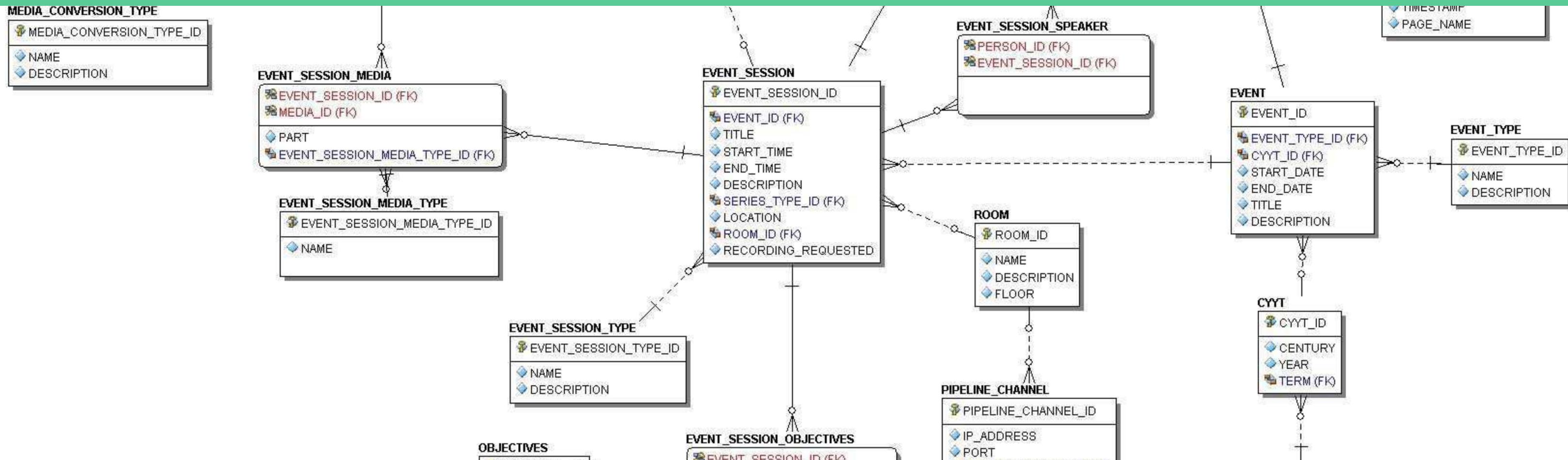
Finding and implementing solutions is thrilling and satisfying for us. Finding problems? Not so much.

```
if (A && B) {  
    // the problem must be C  
    solveUsingD();  
}
```

But the symptoms may not indicate the real problem.

```
if (A && B) {  
    // the problem must be C  
    solveUsingD();  
}
```


Always get to the heart of the problem.

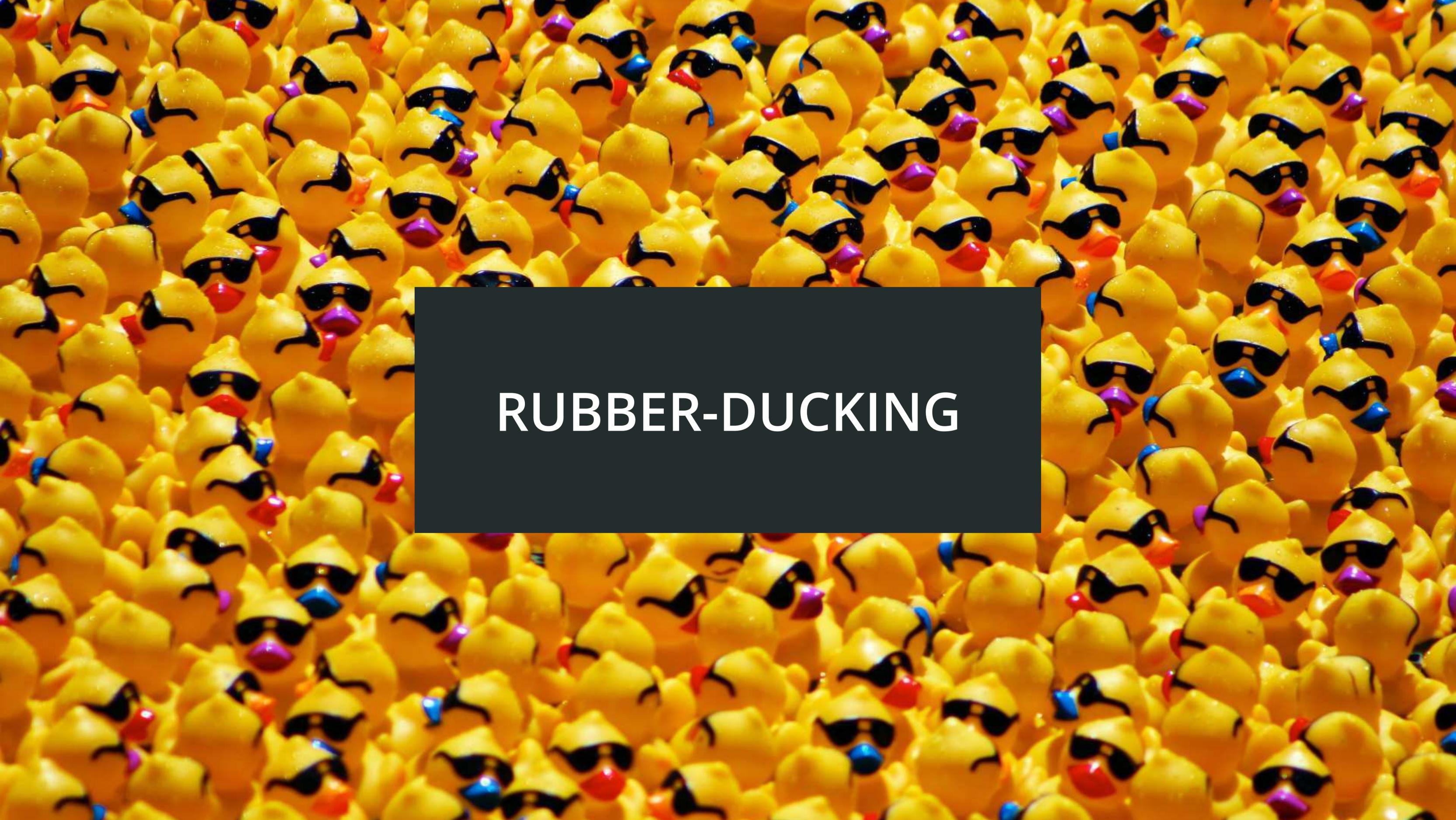




DEBUGGING THE IRREPRODUCIBLE PROBLEM

- ❖ Do the symptoms point to a potential problem area?
- ❖ Sometimes we can't solve the problem.

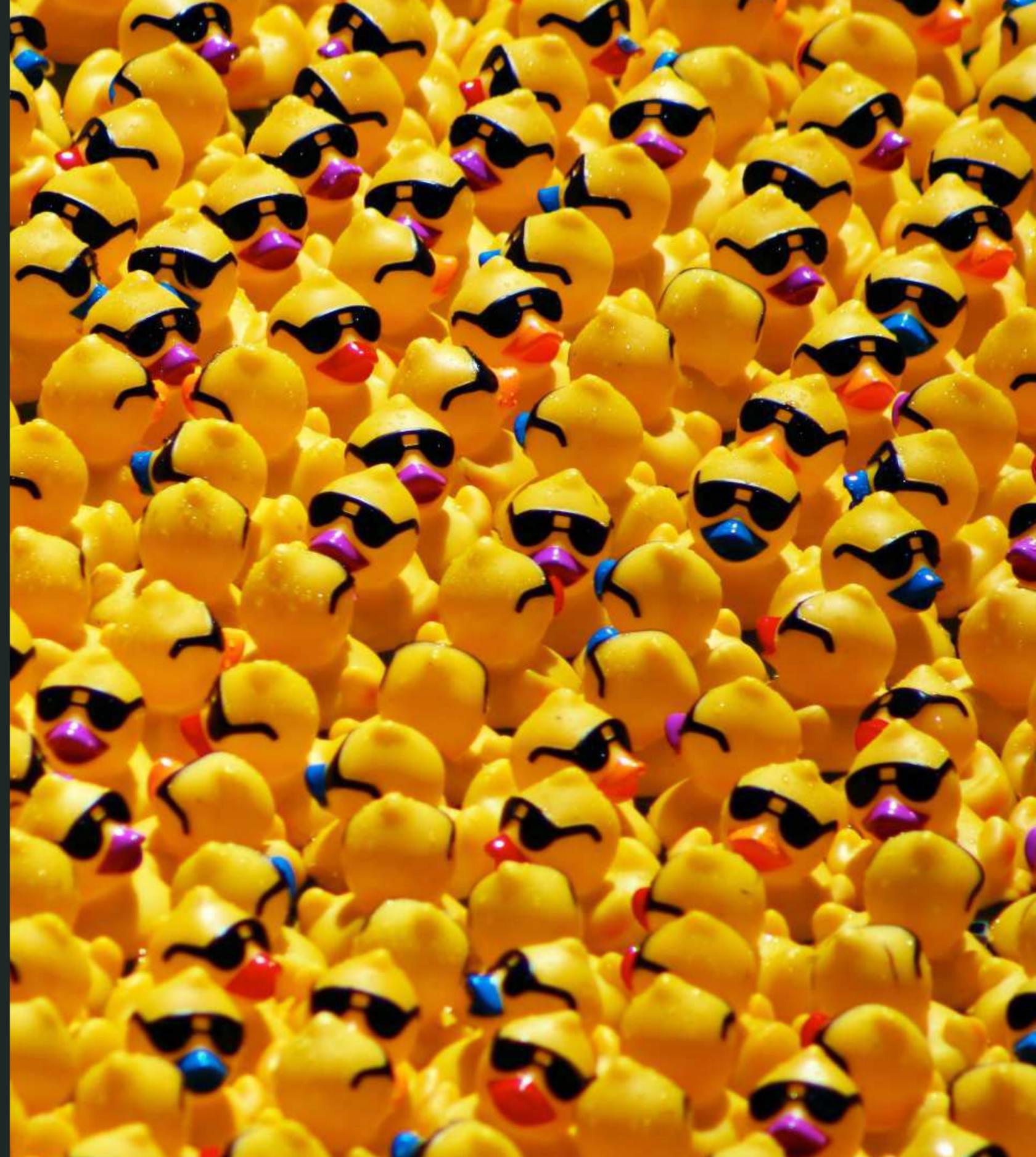


A large, dense field of yellow rubber ducks. Many of the ducks are wearing black sunglasses and have their beaks covered with small, colorful plastic accessories in various colors like red, blue, purple, and orange. The ducks are packed closely together, filling the entire frame.

RUBBER-DUCKING

1. Beg, borrow, steal, buy, fabricate or otherwise obtain a rubber duck (bathtub variety).
2. Place rubber duck on desk and inform it you are just going to go over some code with it, if that's all right.
3. Explain to the duck what your code is supposed to do, and then go into detail and explain things line by line.
4. At some point you will tell the duck what you are doing next and then realize that that is not in fact what you are actually doing. The duck will sit there serenely, happy in the knowledge that it has helped you on your way.¹⁰

"...consciousness developed as a way to internalize talking to oneself. Speaking words triggers parts of the brain involved in moving the diaphragm, tongue, lips, vocal cords, etc. Hearing words triggers parts of the brain connected to the ears. Speaking aloud can be a bad survival strategy, especially when you're thinking about the chief's wife, so we developed consciousness as an internal monologue. It works, but it doesn't exercise as many areas of the brain as speaking and hearing your own words."⁹





SLEEP ON IT



Unconscious thought:

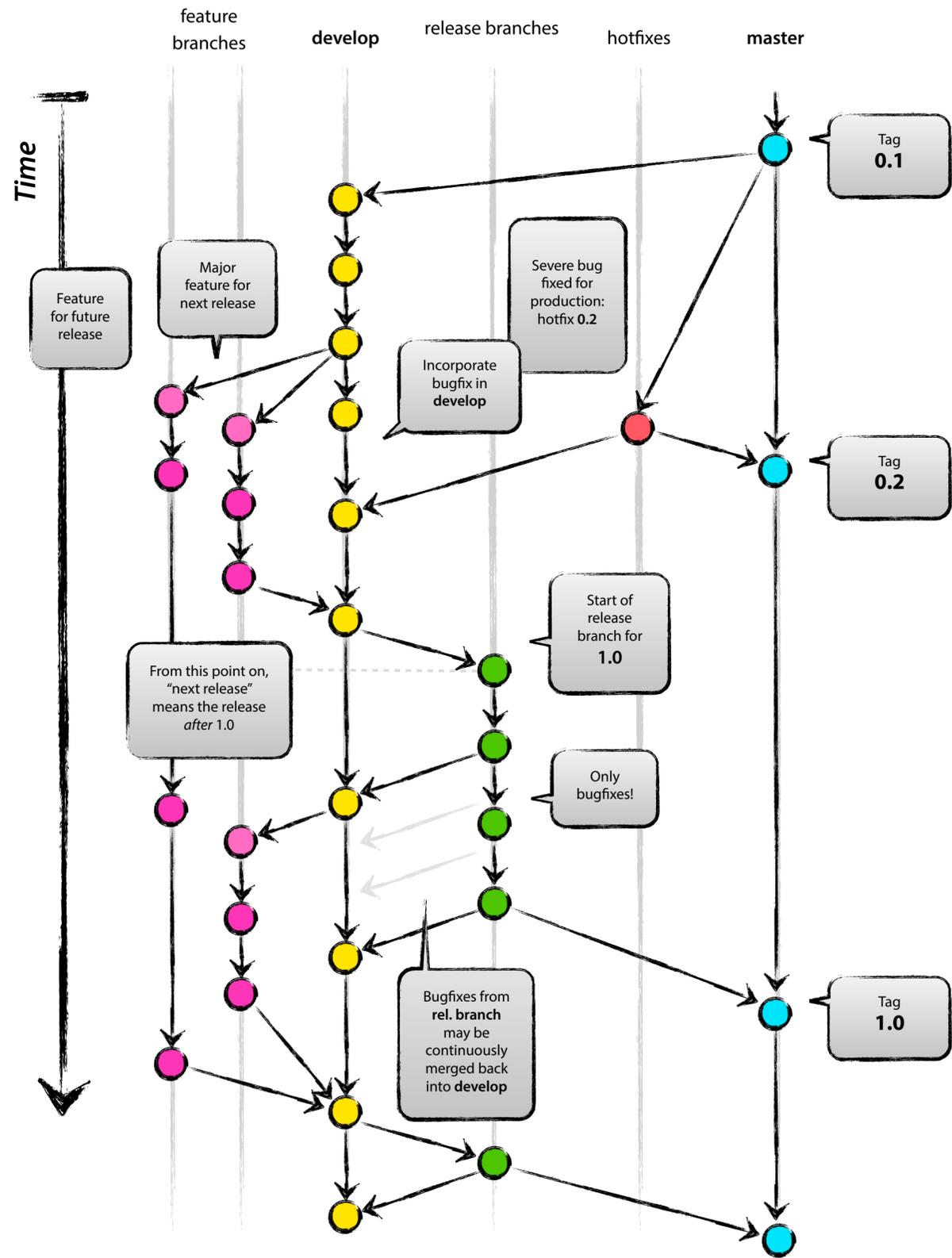
- ❖ Active, goal-oriented process
- ❖ Usual biases are absent
- ❖ Components weighed more equally¹¹



DEVELOP WITH PURPOSE



- ❖ Be intentional
- ❖ Grok what it is you are doing



Grok what it is you are doing.



“The difference between science as it stands now and the Buddhist investigative tradition lies in the dominance of the third-person, objective method in science and the refinement and utilization of first-person, introspective methods in Buddhist contemplation. In my view, the combination of the first-person method with the third-person method offers the promise of a real advance in the scientific study of consciousness.”¹²



THANK YOU. ANY QUESTIONS?

If you want to talk more, feel free to contact me.

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This presentation was created using Keynote. The design was inspired by the [Catalyst web theme](#) created by Pixelarity. The text is set in [Open Sans](#). The source code is set in [Ubuntu Mono](#). The iconography is provided by [Font Awesome](#).

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Debugging Zen

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Ramsey, Ben. "Debugging Zen." SunshinePHP. Embassy Suites Miami International, Miami. 6 Feb. 2015. Conference presentation.



END NOTES

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2. <http://en.wiktionary.org/wiki/zen>
3. <http://en.wiktionary.org/wiki/Zen>
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5. McCrea, S. M. (2010). Intuition, insight, and the right hemisphere: Emergence of higher sociocognitive functions. *Psychology Research and Behavior Management*, 3, 1–39. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3218761/>
6. From *Steve Jobs* by Walter Isaacson, page 49
7. From *Grow Your Intuition: 6 Simple Steps* by Suzan Bond, page 30
8. <http://c2.com/cgi/wiki?RubberDucking>
9. Quoted from <http://c2.com/cgi/wiki?RubberDucking> paraphrasing *Consciousness Explained* by Daniel Dennett
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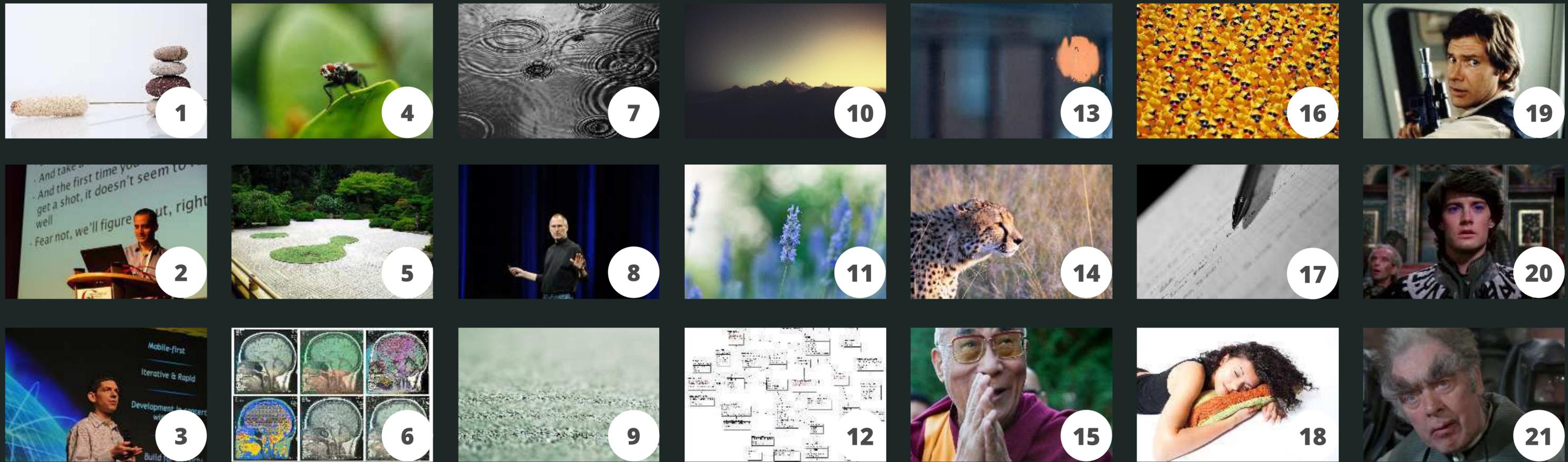


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