



According to trends in Twitter data, people tweet about “health” most often between the hours of 6 a.m. and 9 a.m.

CAREERS

An Antidote to Impostor Syndrome

Impostor syndrome is defined as “a psychological phenomenon in which people are unable to internalize their accomplishments” [1]. It triggers thoughts like: “I don’t belong; someone made a mistake when they hired me.” Or, “My ID badge didn’t work on the door. Oh my God! They caught me! I’m fired.”

This affects people across all races, all genders, and all ages. It most commonly affects those who are new to their work, and those who don’t have several role models in their workplace. It leads to the burnout of strongly capable people. Left unaddressed, it reduces what people can do in their personal and professional lives.

Impostor syndrome affects most people at some point during their careers. Online estimates put the number at 70 percent of engineers, while a quick poll of 30 personal engineering contacts put it above 90 percent. The first step to fighting it is easy enough: Simply acknowledge impostor syndrome as a common feeling, built into human psychology. If that doesn’t work, here is a five-step approach to prevent it from slowing you down.

STRATEGY #1: TRACK YOUR ACCOMPLISHMENTS

Track your accomplishments in a format where you can review them over time. The format is up to you. The logging doesn’t have to be long form; something short and concise is likely better. When in doubt, focus on the positive here, and make sure to document your successes, even the small ones. When you record a success, also make sure to pause and reflect. Dwelling on successes as they happen can help to build and strengthen long-term motivation.

Logging also helps to build a



healthy system of validation. Feedback from others is never fully informed, as others will not have full knowledge on what you have done and why. You have this missing context, which can be especially useful later for evaluating negative feedback. Tracking can help you hold an honest light to criticism.

STRATEGY #2: COMPARE WITH CARE

There’s a related cognitive bias to impostor syndrome, called the Dunning-Kruger effect. Quoting from the initial study, “the miscalibration of the incompetent stems from an error about the self, whereas the miscalibration of the highly competent stems from an error about others” [2].

The first half of this is easy to see: People who are new at something do not know how much more there is to

learn, so they often rate themselves as competent. That’s beneficial, as it lets us keep learning new things without initial discouragement!

But the second half is the part that stalls our learning and progress. Once you start to gain enough skill to judge what a terrific skill would look like, you realize how far away that might be. You then see others who are considerably more skilled than you are, and discouragement can set in.

Everyone makes a mistake here: comparing without context. If I compare my skill at Java to another engineer’s, I don’t know what it took for them to get to their current skill. I don’t know what other efforts or distractions they had.

The fix here is simple. In the first step of this approach, you started logging your work and successes. That gives you



When a hospital employs more empathetic nurses, its ratio of positive to negative sentiments on social media jumps from 2.4:1 to 3.3:1.

one person you can compare against, with full context, and in a healthy way. You compare and compete against yourself. This helps stop comparisons against others, which is a common recurring trigger for impostor syndrome.

STRATEGY #3: SET GOALS

When you compare against yourself it helps to have set goals, so you can see how you're doing and what you set out to do. It is important to never lower your self expectations based on impostor syndrome. Set your goals high, even if you miss them from time to time.

You might set goals yearly, quarterly, or even weekly. They should be easy to grade. Examples include: "learn enough ObjectiveC to show a demonstration app," "learn enough French to order dinner," or "get an A in data structures."

Each person and each project at Google has quarterly goals, which they set themselves. At the end of each quarter, they score the results, and partial success counts. Getting three quarters of the way there scores as a 75 percent for that goal. If an engineer always hits all of their goals (averages 100 percent), they know they're aiming too low. If they get half of the goals or less, they know they set the goals too high. An ideal success rate is 70-80 percent, which means successful engineers miss 20-30 percent of their goals, every quarter.

Setting goals like this is healthy, while still pushing strong performance. Failure after strong effort is a part of trying hard, and learning to fail is an important skill to build.

STRATEGY #4: AVOID SELF SABOTAGE

Your tracking needs to be honest. If something fails, do not be negative, but

do not excuse yourself from accountability. Do not dwell on failures, but do a quick retrospective analysis to help avoid the same failure going forward.

The postmortem is a technique used at Google to learn from failure. The postmortem is a concise written document that explains the following:

1. **What went wrong?** Add enough detail to bring it back to mind later.

2. **The cost of it going wrong.** How bad was it?

3. **A triage list.** What tasks do you have to do to fix it?

4. **A preventative list.** What can you change so this will not happen again?

There is no punishment or negativity in a postmortem. Punishing ourselves for failures does not help most people learn to succeed.

Google postmortems are public to any employee who could potentially repeat the mistake. For use in personal tracking, the document can remain private.

Failures have costs, which can include time, money, reputation, and/or opportunities. Since we have already paid the cost, a postmortem helps to reinforce the lessons learned, which can make the costs worthwhile. Make the postmortem's preventative list part of your future goals.

STRATEGY #5: FOLLOW UP AND GET HELP

There are a lot of talks, papers, and other resources about impostor syndrome available online; a quick web search will turn up quite a bit. Go do some research, as unblocking your success is worth direct effort on your part.

Impostor syndrome is definitely something to discuss with friends and peers. It does not have to be a deep chat, but just confirming it affects

other people around you will provide ongoing support.

If you get tired or stuck trying to work on this, actively find help. Ask someone you respect and trust (a professional, a mentor, a leader in your community, or a family member who knows you well). These people can offer perspective and tools for calibrating your judgment and for staying engaged.

YOU ARE NOT ALONE

By keeping track of our successes, comparing against ourselves and not others, setting aggressive goals in a reasonable way, avoiding self sabotage, and seeking additional help, we can effectively and mitigate the harmful effects of impostor syndrome. Thus we can improve both our happiness and productivity in our careers and everyday life.

Because enough people are reporting impostor syndrome, it is a regular topic at colleges, corporations, and conferences worldwide. However, it is something that you can work on and work through. Give it some thought, and discuss it with a good friend or a friendly peer; you may be surprised at their response.

References

- [1] Impostor Syndrome. Wikipedia, The Free Encyclopedia. Wikimedia Foundation, Inc. 27 Oct. 2014. Web. 28 Oct. 2014.
- [2] Kruger, J., and Dunning, D. Unskilled and unaware of it: How difficulties in recognizing one's own incompetence lead to inflated selfassessments. *Journal of Personality and Social Psychology* 77,6 [1999], 112134.

Biographies

Dean Jackson's a member of the ACM and a technical program manager working at Google, focused on Search and Security.

Taliver Heath works in the technical infrastructure area of Google at the Mountain View campus, and has been facilitating the Life of an Engineer program to new hires for the past five years.