

*You should **always** continue **learning***

- ▶ Continuing with the functional paradigm:
 - ▶ Haskell!
 - ▶ Data Structures!
- ▶ Continuing with formal education:
 - ▶ Grad School!
- ▶ Continuing with learning:
 - ▶ Dealing with impostor syndrome

Haskell has various advantages and disadvantages versus Standard ML:

Advantages of Haskell vs. SML

- ▶ Lazy Evaluation
- ▶ Friendly syntax (though this is subjective)
- ▶ Bigger community
- ▶ Purity

Advantages of SML vs. Haskell

- ▶ REPL interpreter matches file syntax *exactly*
- ▶ Impurity
 - See [this StackOverflow post](#) for more discussion

Learn you a Haskell For Great Good!

Conclusion

Procter

Haskell

Grad School

Impostor Syndrome

Maybe the biggest advantage of the language, though, is the “textbook” *Learn You a Haskell For Great Good!* by Miran Lipovača.

The book is . . .

- ▶ Aimed at beginners
- ▶ Hilarious

Continuing with Functional Programming

Conclusion

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Often, one's second course in programming covers **data structures**.

Functional programming need not be any different! Check out the highly-recommended *Purely Functional Data Structures* by Chris Okasaki.

Much the same way the functional paradigm can change the way you looked at **computation**, so too can it change how you look at **data**.

Example: All versions of a data structure in Haskell are automatically **persistent**!

Continuing your education with Grad School

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Grad School

Impostor Syndrome

I *love* being in grad school. And while I'm not claiming it's the best choice for everyone. . .

- ▶ You get to think very deeply, about
- ▶ **Projects that you care about**, while
- ▶ Working with **crazy-smart people**, and
- ▶ **Traveling the world**, to
- ▶ **Contribute to the global body of scientific knowledge!**

No matter what you do, though, you should be aware of how much you know, and have a good attitude towards learning. I think the best treatment of “impostor syndrome” comes from [Alicia Liu](#).

In 2013, 2014, and 2015, she wrote three short essays on the topic.

2013: Overcoming Impostor Syndrome

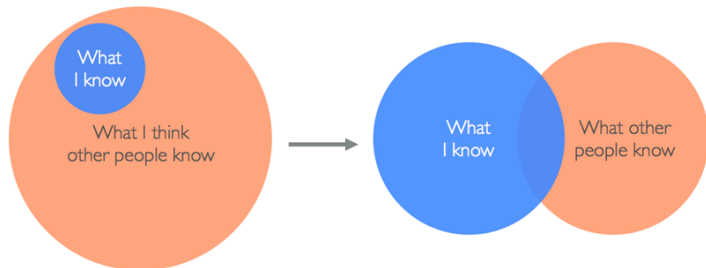
Conclusion

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I [felt that I] got into university due to affirmative action. I had a good GPA because we didn't have "weeder" classes and I didn't take the really hardcore CS courses. I got my job because my interview only covered things I knew. I got excellent performance evaluations because I was given manageable assignments. I did well in school and work projects because friends who were good programmers helped me out. . .

There are two characteristics of coding that can make programmers feel like they're really struggling. . . The first thing. . . is that you're almost guaranteed to have to learn new things as you're doing it. . . The second characteristic. . . is that it consists of near constant failure.

Overcoming Impostor Syndrome

2014: IS Is Not Just a Confidence Problem

Conclusion

Procter

Haskell

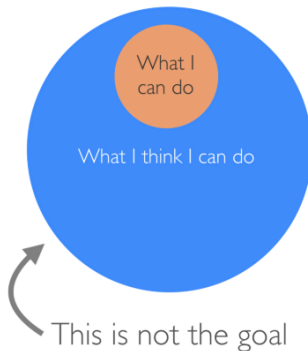
Grad School

Impostor Syndrome

Impostor Syndrome



Overconfidence



2014: IS Is Not Just a Confidence Problem

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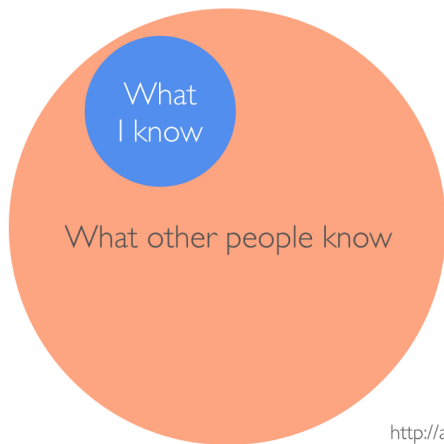
Grad School

Impostor Syndrome

*Impostor syndrome is not simply an inherent lack of confidence. It's a psychological phenomenon that arises from an incorrect assessment of ones' abilities compared to peers. . . Instead of blindly urging for more confidence, we can instead **acknowledge** the downsides of overconfidence, which can often lead a team, product, or even company astray. We can **educate** ourselves about the hidden biases that lead us to venerate confidence over competence. We can actively **work** towards removing bias. . . We can **make room** for people to voice, acknowledge, and heed doubt. But we can do this without calling it impostor syndrome, praising it, and ignoring its harm.*

Impostor Syndrome Is Not Just a Confidence Problem (Emphasis Added)

This is not Impostor Syndrome
This is Reality for every beginner



2015: You don't have Impostor Syndrome

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Impostor Syndrome

Learning to program is hard. . . This is not Impostor Syndrome, this is Reality. My concern with this misrepresentation of Impostor Syndrome is that it pathologizes the very process of learning itself.

What exacerbates the effect of making people feel like impostors are the blowhards that litter this industry, who want to appear smarter than everyone else, and are constantly putting others down for not knowing this and that, as if they had been born knowing how to program.

Overcoming impostor syndrome is not the issue for the vast majority. The real struggle is to not feel intimidated and diminished by [jerks], to value the skill you've acquired, but also recognize your limitations, which is the way to keep learning.

You don't have Impostor Syndrome (Emphasis in Original)