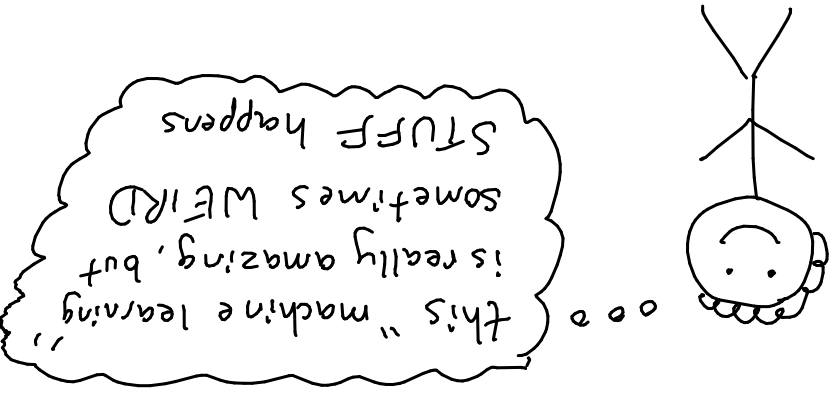
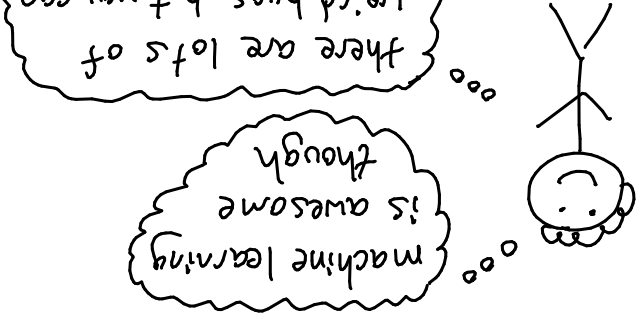


Production

machine learning



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↳ jvs.ca/zines ↳
↳ this? There are more of these at

What's this?

I read "Rules of Machine Learning: Best Practices for ML Engineering" and a lot of it really resonated with my experience doing machine learning.

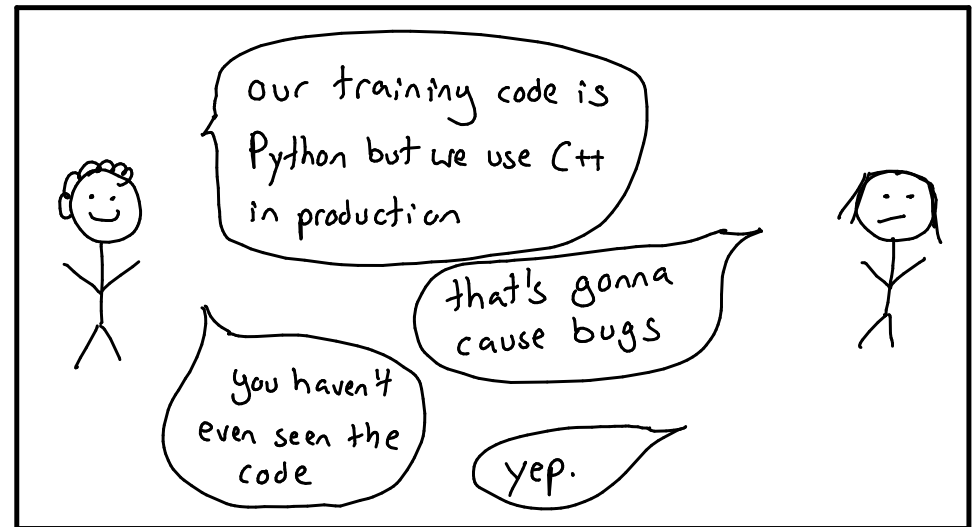
You can find that PDF at:

→ bit.ly/ml-rules ←

In this zine, I'll talk about what I've learned about machine learning! Basically I want to talk about 5 of my favourite rules from that PDF.

(there are 43 rules, it's great advice, you should read them all)

Rule # 32: Reuse code between training + production when you can



- you're gonna have bugs related to training / production differences
- you probably can't make this perfect
- just try to monitor differences.

Rule #3: Use machine learning instead of complicated heuristics

Simple heuristics can be awesome \equiv hey, look, if I just recommend Minecraft to every 8 year old, it works great

Ship it!

but complicated heuristics are a nightmare

if (age > 7 and gender = M and (country = "Canada" or country = "USA") and favorite-color = blue) ...

I have regrets

machine learning is much more maintainable than that mess, and it'll perform better

this model is still a bit complicated, but at least it's not based on one ad hoc data analysis I did 2 years ago!

Rule #24: Measure the change between models

Let's TEST it before we put it into prod!

OK, I ran the old + new models on a whole bunch of examples!

What if the new model breaks EVERYTHING?

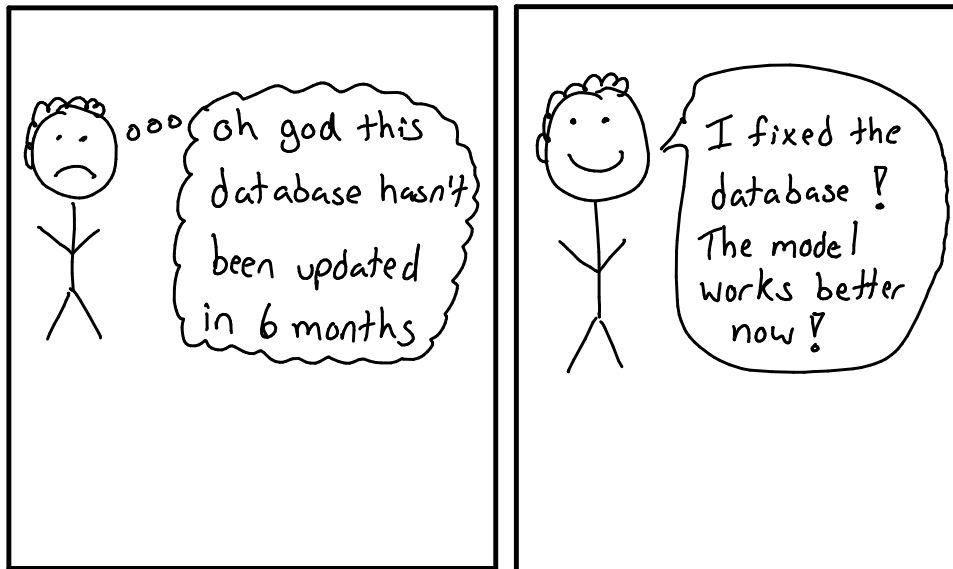
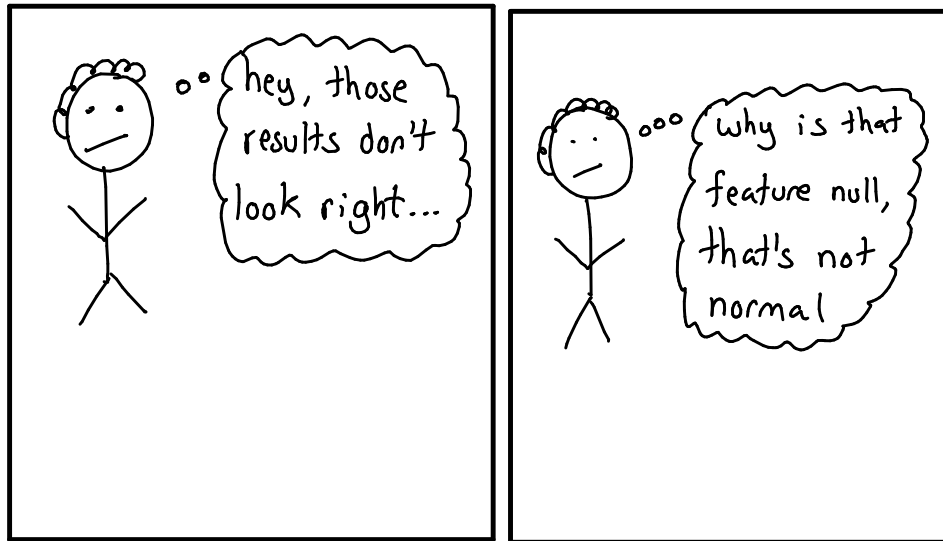
measure the difference

well, only 3% of examples have significantly different predictions, that change isn't too big!

that was easy, and I have a better idea of what to expect

if the difference is big, I want to be extra sure that it's an improvement!

Rule #10: watch for silent failures



Rule #16: keep your pipeline healthy

