



Four years of Python

Tales of an (un)experienced Pythonista

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Who the *hell* am I?

- */du-art/*
- From Lisbon, based in Copenhagen
- I like running a lot
- Ancora imparando l'italiano (ragazza di Ancona)
- *Past:* Strategy, Product Management, New Ventures, Management Consulting
- *Now:* ML Engineer @ Amplemarket / Contractor
- *Always:* Python (well, Computers in general)



**Big thanks to
Amplemarket**

amplemarket.com/careers



This is not a technical talk

```
if experience_years <= 4:
```

- How to be a better dev
- Tips and tricks
- Opinionated advice

```
else:
```

- Reminisce
- Celebrate
- Stay intentional



1 | Reading is better than googling



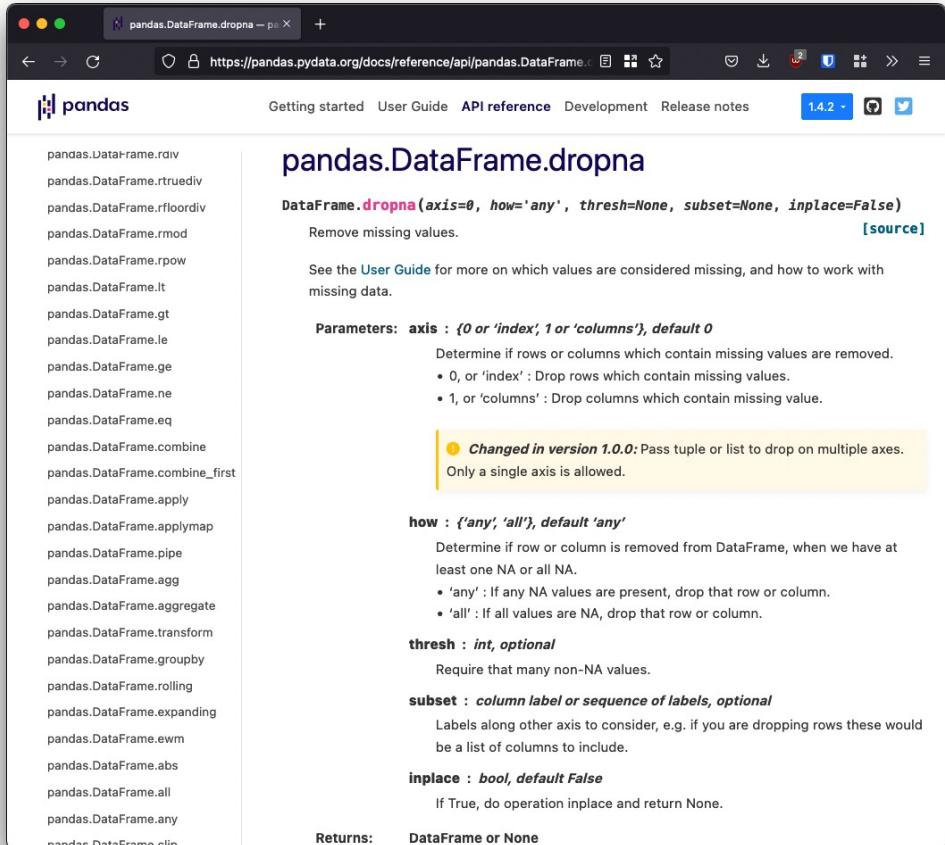
When we start, we have *superpowers*

```
1 import re
2 import argparse
3 import numpy
4 import pandas
5 import json
6 import datetime
7 import pathlib
8 from sparse_dot_topn import awesome_cossim_topn
9 from sklearn.feature_extraction.text import TfidfVectorizer
10
11 def read_csv_file(filepath):
12     required_columns = ['title', 'id']
13     filepath = pathlib.Path(filepath)
14     dataframe = pandas.read_csv(filepath)
15
16     if set(list(dataframe)) != set(required_columns):
17         raise ValueError(
18             f"Make sure that the input csv files have the following columns: {required_columns} "
19         )
20
21     names = dataframe["title"]
22     ids = dataframe["id"]
23
24     return names, ids
25
26
27 def preprocess(string):
28     string = str(string)
29     remove_special_chars = re.compile("[^a-zA-Z0-9]+")
30     string = string.lower()
31     string = string.strip()
32     string = remove_special_chars.sub(" ", string).strip()
33
34     return string
35
36
37 def ngrams(string, n=3):
38     string = re.sub(r'[^ -./]|\s+', "", string)
39     ngrams = zip(*[string[i:] for i in range(n)])
40     return ["".join(ngram) for ngram in ngrams]
41
42
43 def vectorize(reference, target, analyzer):
44     vectorizer = TfidfVectorizer(min_df=1, analyzer=analyzer)
45     tfidf_matrix_reference = vectorizer.fit_transform(reference)
46     tfidf_matrix_target = vectorizer.transform(target)
47
48
49 NORMAL ↵ new_version similarity.py python utf-8[unix] 7% ≡ 11/157 ln : 1
```

- Autocomplete
 - Google
 - Stack overflow
 - Nails everywhere
 - Pip install the world
 - But.. We forget quickly



But there's quite nothing like reading



- What does it do?
- Options?
- Default behaviors
- Maybe I can re-use this
- **It *actually* sticks**



2 | **Explicit** is better than **implicit**



“I can make this program shorter”



```
print len((lambda lookandsay: (lambda func1, in1, current_depth1, target_depth1:  
func1(func1, in1, current_depth1, target_depth1))(lambda self, _in, current_depth,  
target_depth: _in if current_depth == target_depth else self(self, ''.join('%d%s'  
% (len(seq), seq[0])) for seq, trash in re.findall(r'((\d)\w*)', _in)),  
current_depth + 1, target_depth), lookandsay, 0, 40))(_input))
```



```
print len((lambda lookandsay: (lambda func1, in1, current_depth1, target_depth1:  
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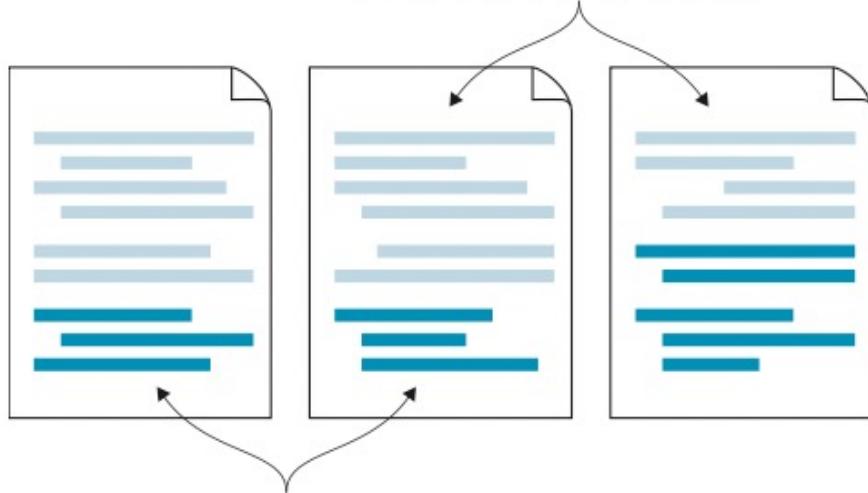
Less lines = better code

```
strings = [x if isinstance(x, str) else pass for index, x in enumerate(list_)]
```

Scheduler, State Machine, Abstract, Controller, Operator...

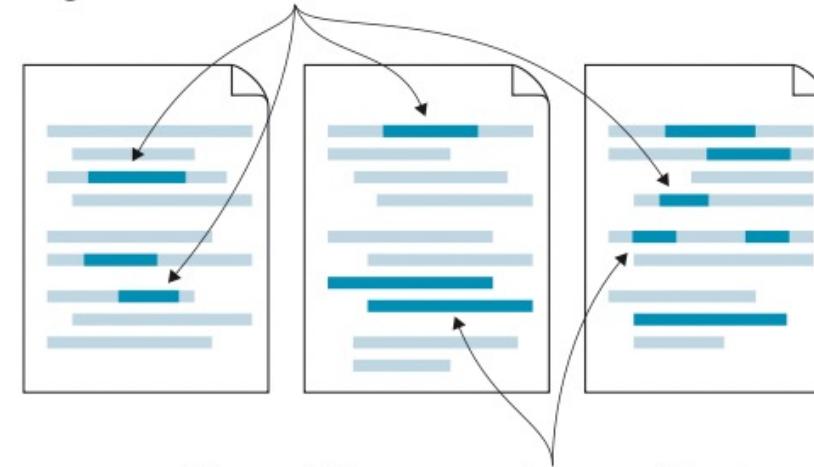


**Extensible code doesn't require
the editing of existing code.**



**Extensible code allows you to add
a new feature by adding new code.**

**Code that isn't extensible requires many edits
throughout the code to add a new feature.**



**Often, additions are made to conditional expressions
or by adding new `else` cases, making the code harder
to understand over time.**

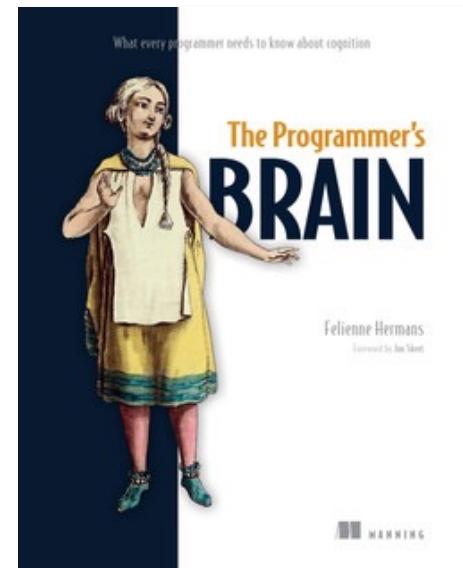
[Reference: Practices of the Python Pro]

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Less lines != better code

- Readable
- Understandable
- Changeable
- Shareable
- Enjoyable



3 | First make it work, then make it pretty





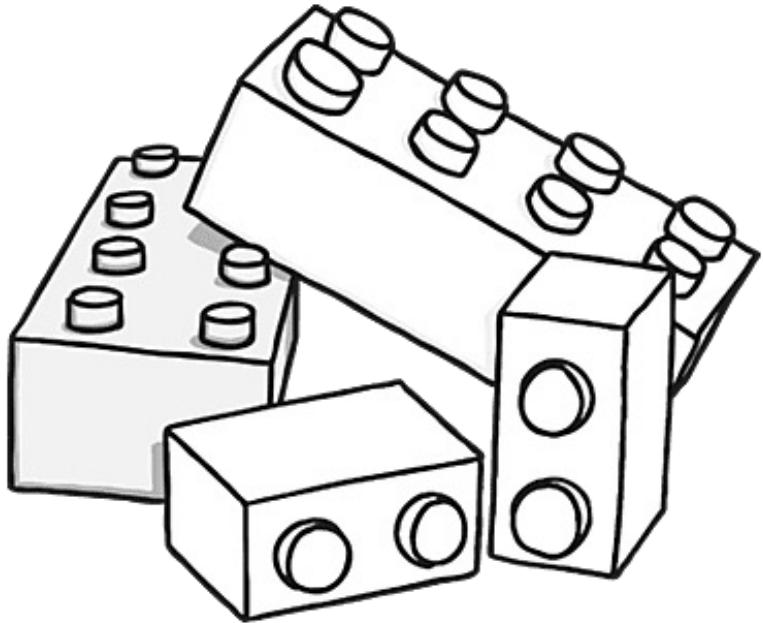
“The Data Management Framework”

(a.k.a. Reinventing the wheel)

- **Me:** Let's not do it
- **Vendor:** Don't do it
- **Partners:** Don't do it
- We **still** did it.
- I hope it went well (*kinda*)



First make it work, then make it pretty



- The bare minimum
- Catching all exceptions
- 100% code coverage
- That weird edge case
- Do users care?
- What NOT to write

More ranting: duarteocarmo.com/blog/simple-software

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4 | Test early, test often



Tests are a mirrage....

- 80% projects don't
- Value is not obvious
- Users don't see them
- Bugs can still happen



Tests are a mirrage....But they matter!

- 80% projects don't
- Value is not obvious
- Users don't see them
- Bugs can still happen
- Yours should
- Deploy with confidence
- What if the app goes down?
- Minimizing vs. Eliminating

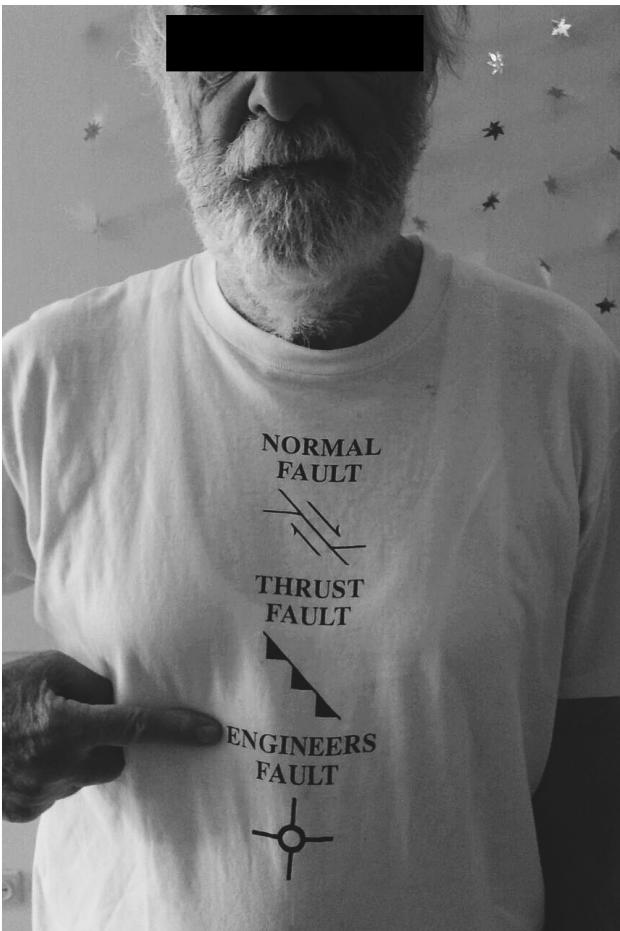
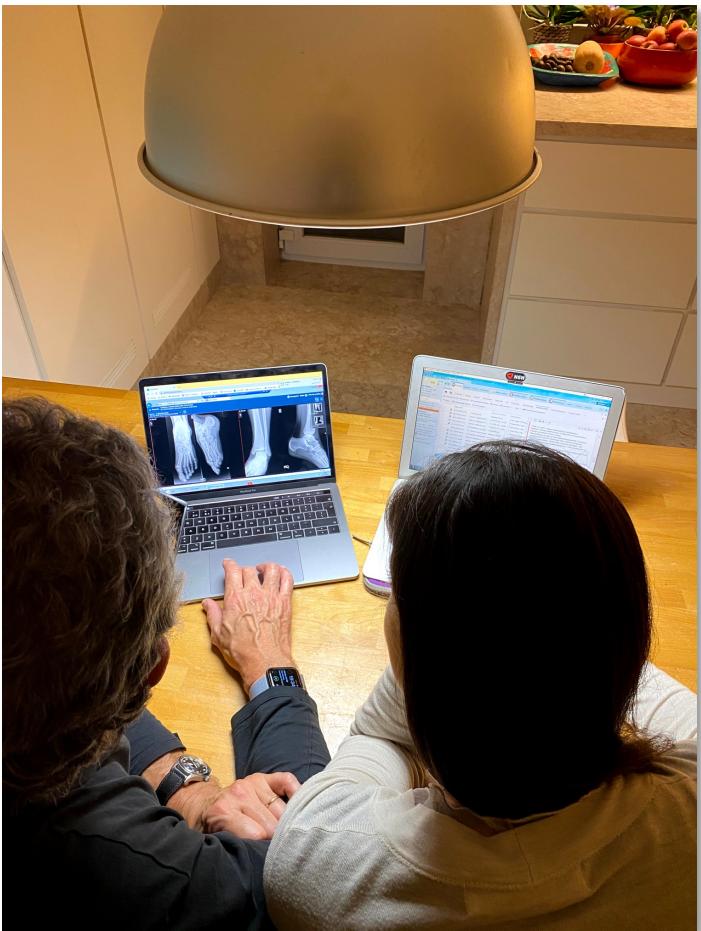


5 | Continuously learn



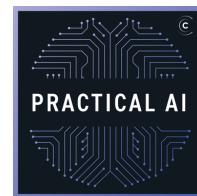
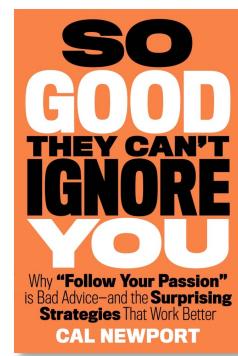
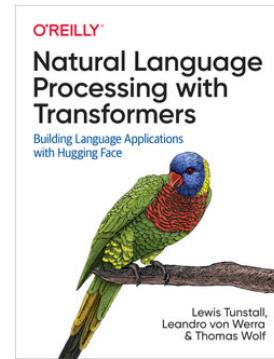
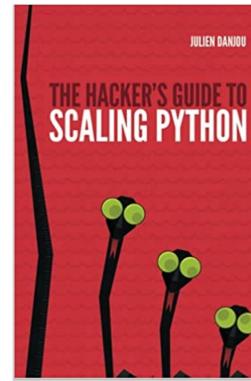
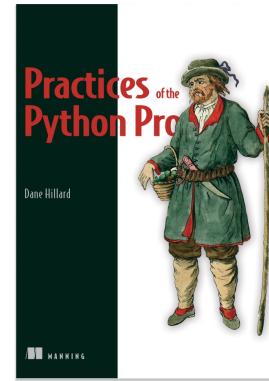
Python is our craft





We should be masters of our craft

- Study
- Stay up-to-date
- Learn regularly
- Build things
- Give back and write



An OCD list of resources

Books

Practices of the Python Pro
Hacker's guide to scaling Python
Designing Data-Intensive Applications
Serious Python

Tutorials

Flask Mega-tutorial
RealPython
Stack Abuse
Kaggle + GitHub

YouTube

CodingTech
Sentdex
Abhishek Thakur
MLOPs Community

Podcasts

Talk Python to Me
Python Bytes
Podcast.__init__
Practical AI

News

PyCoder's Weekly
Medium
Awesome Python Weekly
Reddit RSS

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Thank you, questions?