🚗 Where Is Python Used?

Python Mauritius UserGroup (pymug)

More info: mscc.mu/python-mauritius-usergroup-pymug/

Where Are We? 🏠

Why	Where
codes	github.com/pymug
share events	twitter.com/pymugdotcom
ping professionals	linkedin.com/company/pymug
all info	pymug.com
tell friends by like	facebook.com/pymug

Updates

Our mailing list:

https://mail.python.org/mailman3/lists/pymug.python.org/

Abdur-Rahmaan Janhangeer

Software Engineer having done Python consultancy for many firms

twitter: @osdotsystem

github: github.com/abdur-rahmaanj

www.pythonkitchen.com / compileralchemy.com

Spoke at EuroPython, PyConSweden etc and organise FlaskCon

Work among others for Metabob Inc, probably the only available Python static analyser which integrates AI on earth

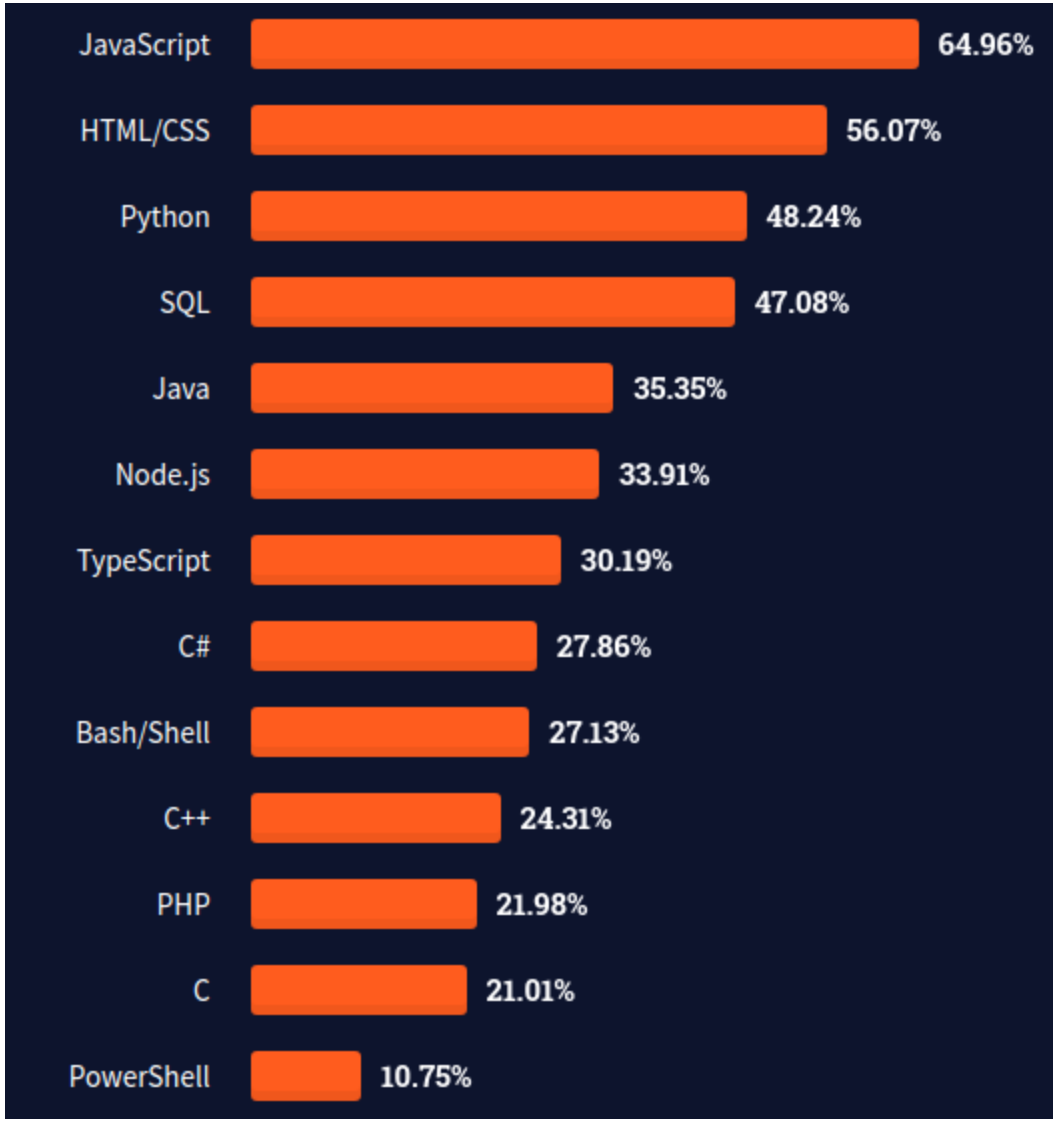
Thank you folks for being around. Thanks comorlab for hosting us!

🚗 Where Is Python Used?

Python is simple to get started with, great to have at hand, quick for prototypes, has some serious applications, improves constantly and continues to sneak in ever new fields. Let's see some applications

World's most popular language?

Stack Overflow Survey 2021



PYPL index (Feb 2022)

Worldwide, Feb 2022 compared to a year ago:

Rank	Change	Language	Share	Trend
1		Python	28.52 %	-1.7 %
2		Java	18.12 %	+1.2 %
3		JavaScript	8.9 %	+0.4 %
4	↑	C/C++	7.62 %	+1.1 %
5	↓	C#	7.39 %	+0.6 %
6		PHP	5.81 %	-0.3 %
7		R	4.04 %	+0.2 %
8		Objective-C	2.46 %	-1.1 %
9		Swift	2.03 %	+0.0 %

TIOBE Index (Feb 2022)

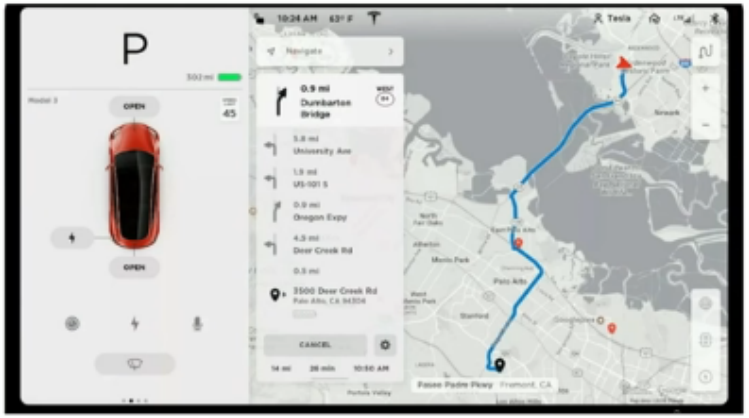
Feb 2022	Feb 2021	Change	Programming Language	Ratings	Change
1	3	↑	Python	15.33%	+4.47%
2	1	↓	C	14.08%	-2.26%
3	2	↓	Java	12.13%	+0.84%
4	4		C++	8.01%	+1.13%
5	5		C#	5.37%	+0.93%
6	6		Visual Basic	5.23%	+0.90%
7	7		JavaScript	1.83%	-0.45%
8	8		PHP	1.79%	+0.04%
9	10	↑	Assembly language	1.60%	-0.06%

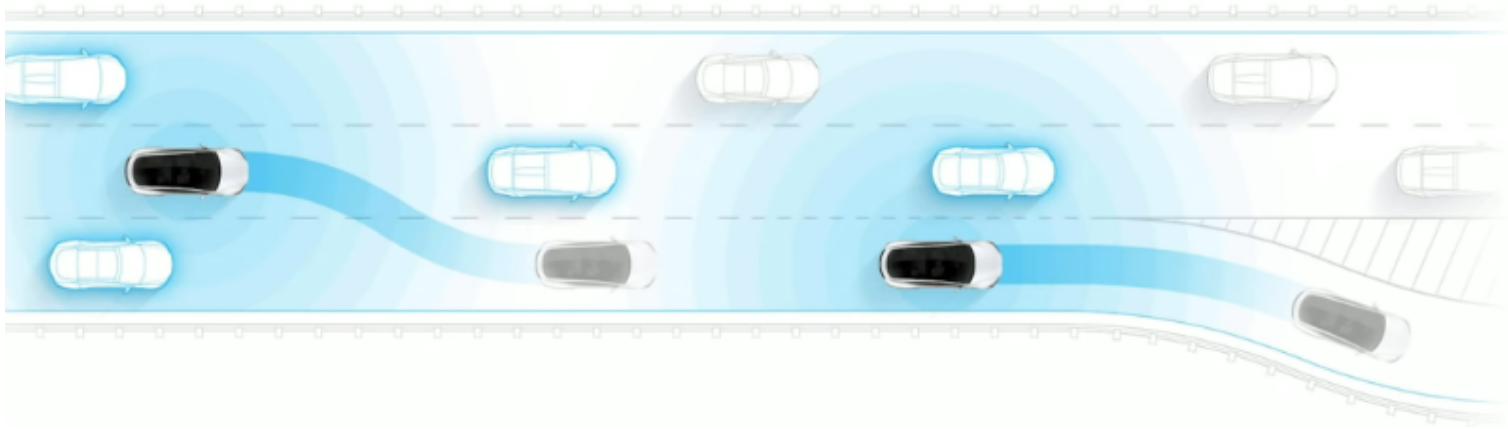
Ai

Tesla: A Python Story

Tesla integrates cutting edge techonlogies for it's cars

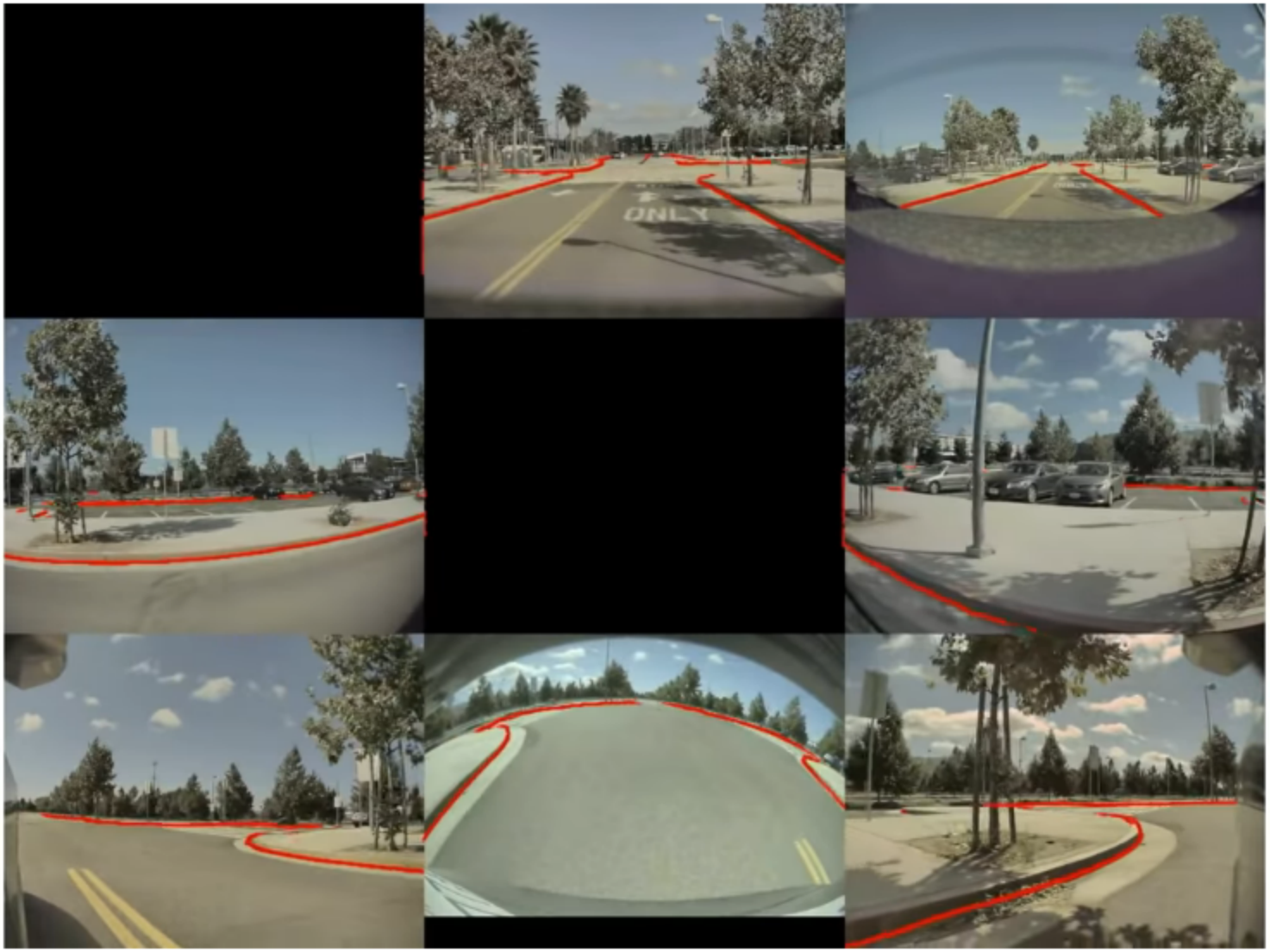
- auto navigation
- automatic lane change





- auto summon: call your car like it's a pet

view of feed with contours identified



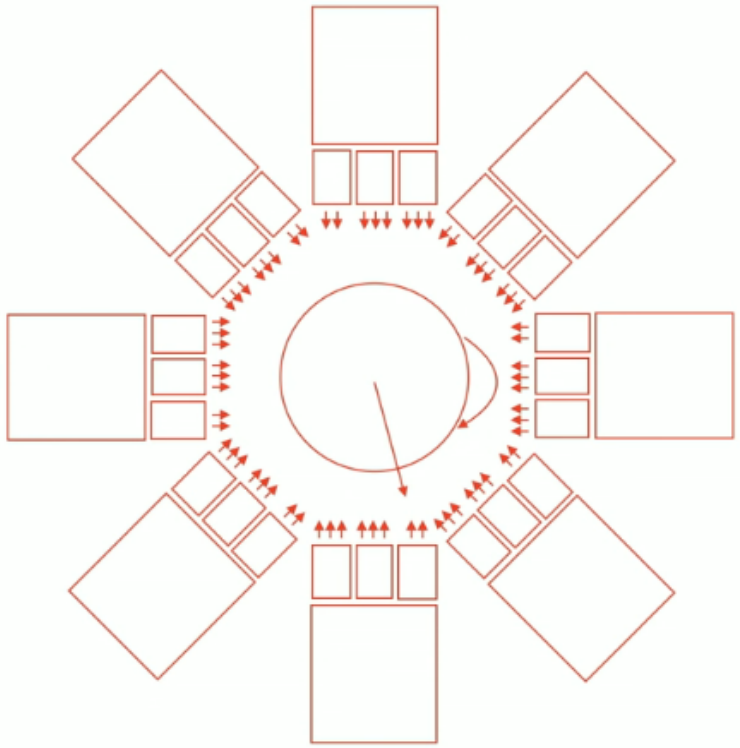
Top Down View
Fisheye
Leftpillar
Rightpillar
Backup

identifies beyond contours

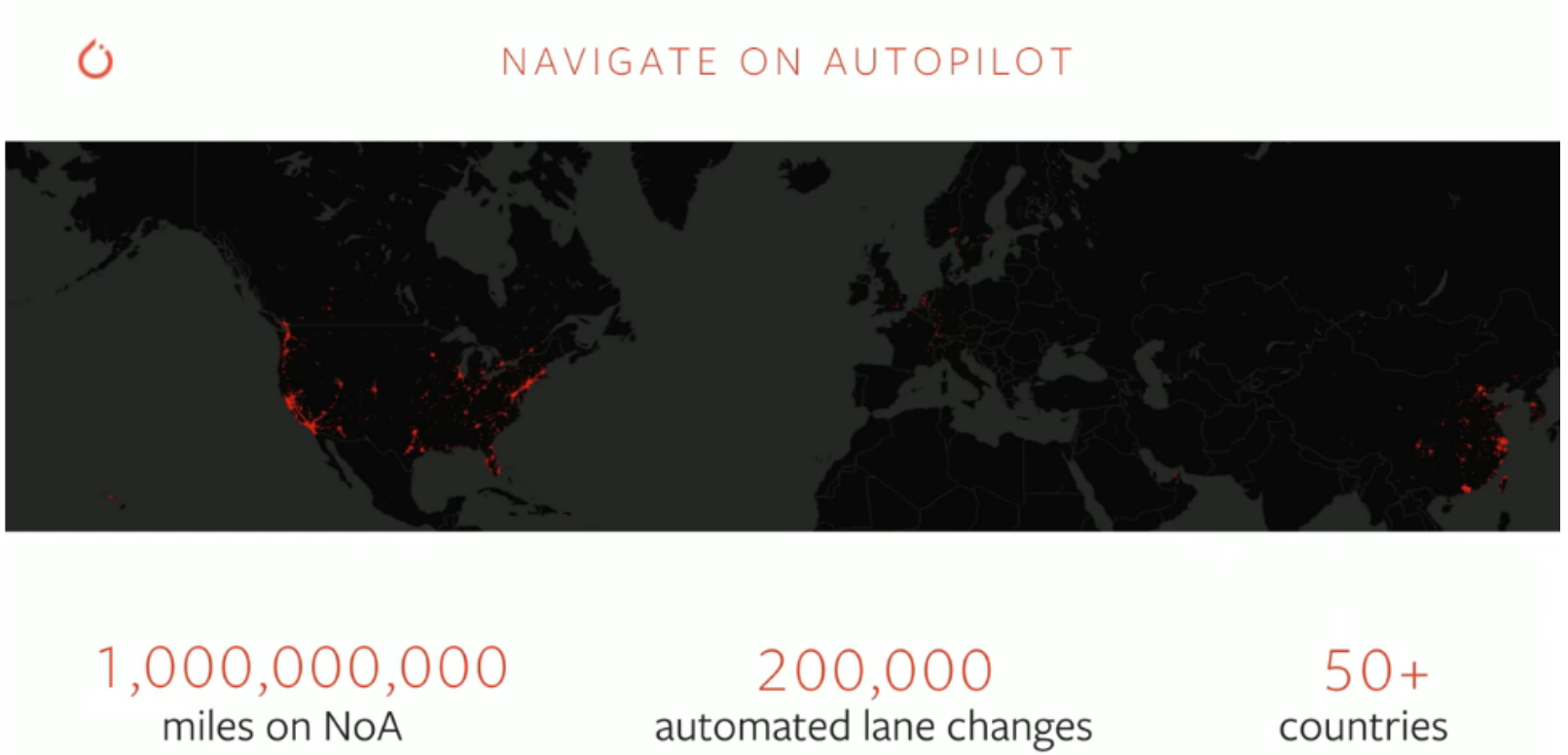
training size (no. of images input)

e.g.:
8 cameras, 16 time steps, batch size 32:
8 x 16 x 32 = **4096 images**
in a single forward pass

Requires a combination of data parallel and model parallel training

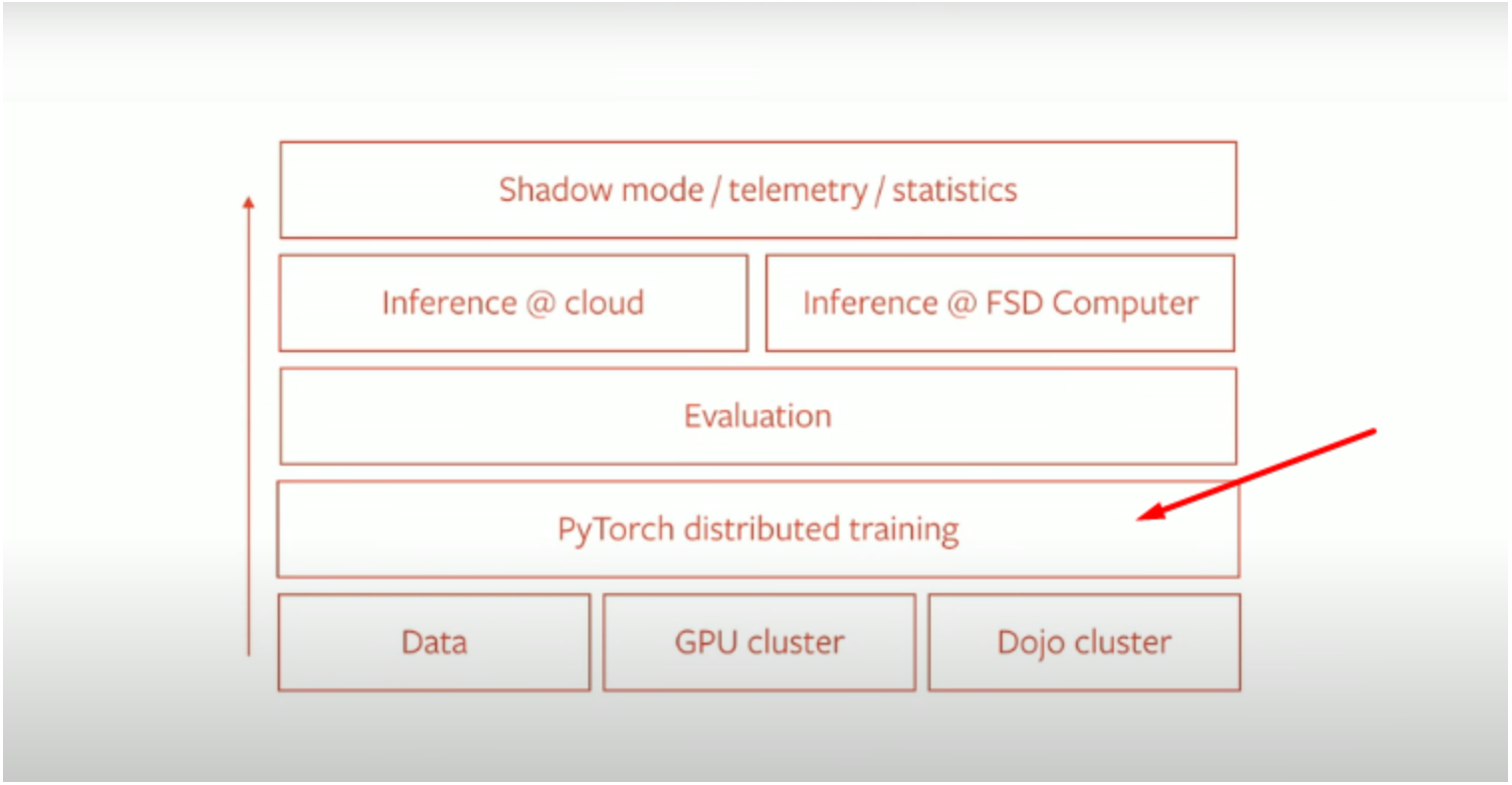


Add to it: 800, 000 auto summon sessions



PyTorch

Lib behind Computer Vision: PyTorch



PyTorch

Primarily developed by Facebook's AI Research lab

How Big Companies Use Python?

References at the end of slides ~

At LinkedIn we ship hundreds of command line utilities to every machine in our data-centers and all of our employees workstations. The vast majority of these utilties are written in Python.(shiv docs)

Instagram Server is entirely Python powered. Well, mostly.

(instagram-engineering.com)

> We decided that Python was fast enough for most of what we need to do (since we push our performance-critical code to backend servers written in C++ whenever possible). As far as typechecking, we ended up writing very thorough unit tests which are worth writing anyway, and achieve most of the same goals. We also had a lot of confidence that Python would continue to evolve in a direction that would be good for the life of our codebase, having watched it evolve over the last 5 years.

(CEO of Quora)

Psst: type checking on large codebases is a common argument on why not to use Python, that's why he included it above.

Python aficionados are often surprised to learn that Python has long been the language most commonly used by production engineers at Facebook.

(engineering.fb.com)

Our Data Science and Engineering teams rely heavily on Python to help surface insights from the vast quantities of data produced by the organization

(netflix-techblog)

Python is heavily used by the Facebook infrastructure teams and is ubiquitous in production engineering

(engineering.fb.com)

The Dropbox desktop client is written in Python, it's one of if not the largest piece of desktop client software that is out, and Dropbox has 400 million users

(Director Of Engineering At Dropbox)

The other thing that keeps us on Python, and this is the major thing, is how readable and writable it is. When we hire new employees … I don't think we've yet hired an employee who knew Python. I just say, "everything you write needs to be in Python." Just so I can read it.

(Reddit Co-founder)

Spotify's backend consists of many interdependent services, connected by own messaging protocol over ZeroMQ. Around 80% of these services are written in Python

(Spotify Labs)

Pinterest is powered by a large Python codebase

(pinterest-engineering)

We intend to cover many topics, as time permits!

References:

PYPL https://pypl.github.io/PYPL.html

TIOBE https://www.tiobe.com/tiobe-index/

Languages SO 2021
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PyTorch At Tesla, Andrej Karpathy
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Icons from iconfinder