

Python: The Big Picture

WHAT IS PYTHON?



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Course Outline



What is Python?

When and where is Python being used?

First steps with Python

Continuing your Python journey



Prerequisites

No Python experience necessary

*Some development experience a plus,
but not required*



Target Audience

Software Developers

Software Testers

Software Managers



Thoughts? Comments? Questions?

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What Is Python?





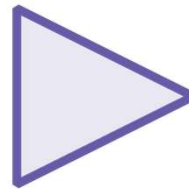
High-level Programming Language



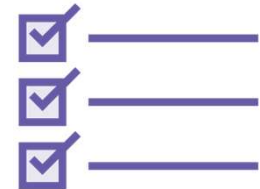
Dynamic



Readability



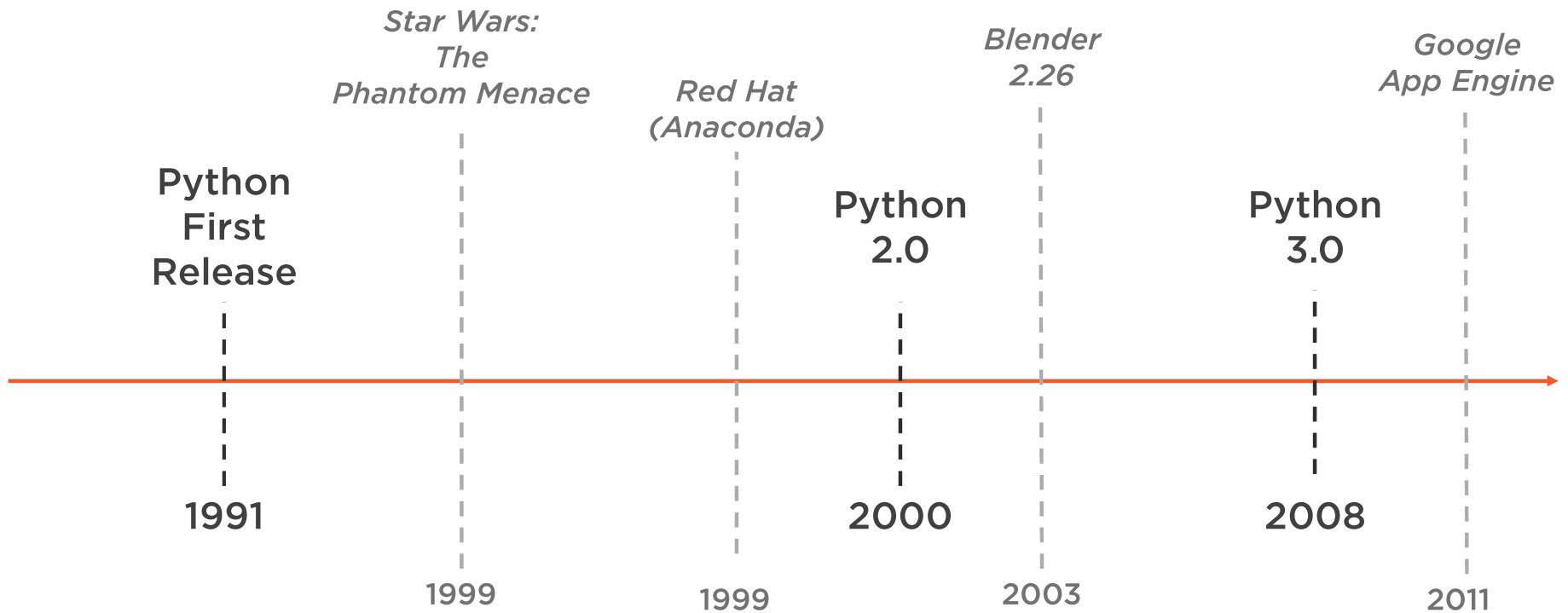
Interpreted



Multi-paradigm



History



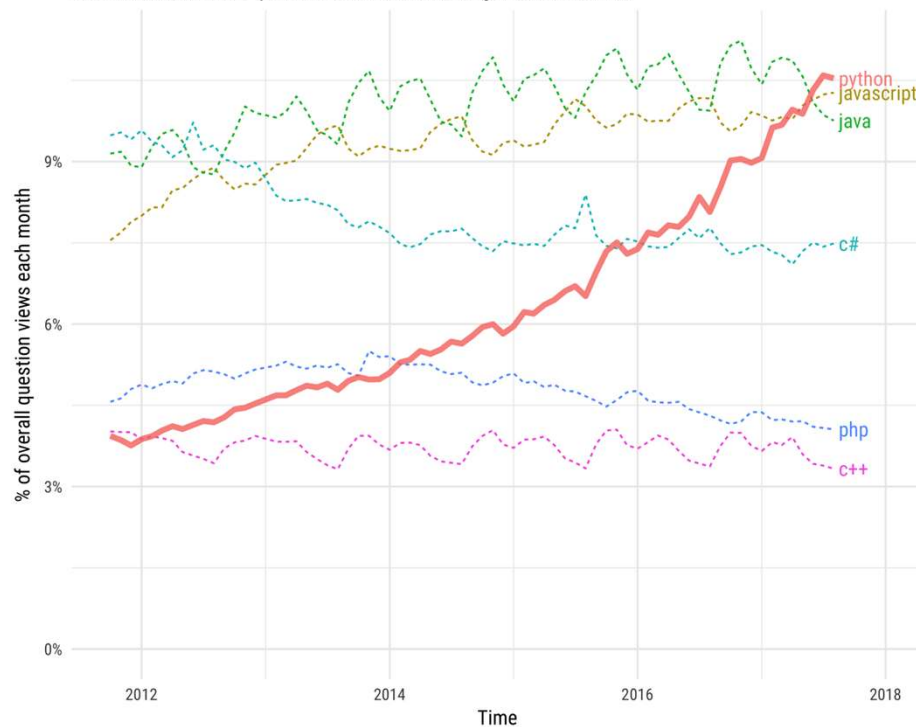
Why Should a Developer Care?



Growing in Popularity

Growth of major programming languages

Based on Stack Overflow question views in World Bank high-income countries



Stack Overflow (<http://bit.ly/2wkMATk>)























Worldwide, Sept 2017 compared to a year ago:

Rank	Change	Language	Share	Trend
1		Java	22.4 %	-0.8 %
2		Python	17.0 %	+4.0 %
3		PHP	8.7 %	-1.0 %
4		C#	8.1 %	-0.4 %
5		Javascript	8.0 %	+0.6 %
6		C++	6.8 %	-0.2 %
7		C	6.1 %	-1.1 %
8	↑	R	3.7 %	+0.6 %
9	↓	Objective-C	3.5 %	-1.4 %
10		Swift	2.9 %	-0.1 %

PYPL (<http://bit.ly/2eJ2rnC>)



Growing in Popularity

Language Rank	Types	Spectrum Ranking
1. Python	 	100.0
2. C	  	99.7
3. Java	  	99.5
4. C++	  	97.1
5. C#	  	87.7
6. R		87.7
7. JavaScript	 	85.6
8. PHP		81.2
9. Go	 	75.1
10. Swift	 	73.7

IEEE Spectrum (<http://bit.ly/2wWgUaB>)

Sep 2017	Sep 2016	Change	Programming Language	Ratings
1	1		Java	12.687%
2	2		C	7.382%
3	3		C++	5.565%
4	4		C#	4.779%
5	5		Python	2.983%
6	7	▲	PHP	2.210%
7	6	▼	JavaScript	2.017%
8	9	▲	Visual Basic .NET	1.982%
9	10	▲	Perl	1.952%
10	12	▲	Ruby	1.933%

TIOBE (<http://bit.ly/2mPBq5f>)



The Python Philosophy

**Beautiful is better
than ugly**

**Explicit is better
than implicit**

**Simple is better
than complex**

**Complex is better
than complicated**

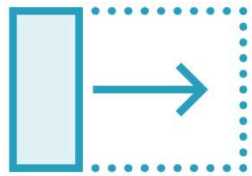
Readability counts



What Makes Python Different?



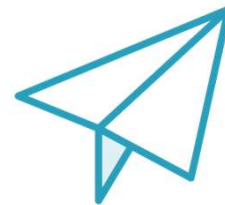
What Makes Python Different?



**Extensible
Design**



**Community
Involved
Design**



**Emphasizing
Fun**



Culture

A Great Time to Start!



Summary



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