



Python Tutorial

Session 1

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EPS Course - School of ECE

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guido van Rossum
1980-Netherland





Interactive

Interpreted

Modular

Dynamic

Object-oriented

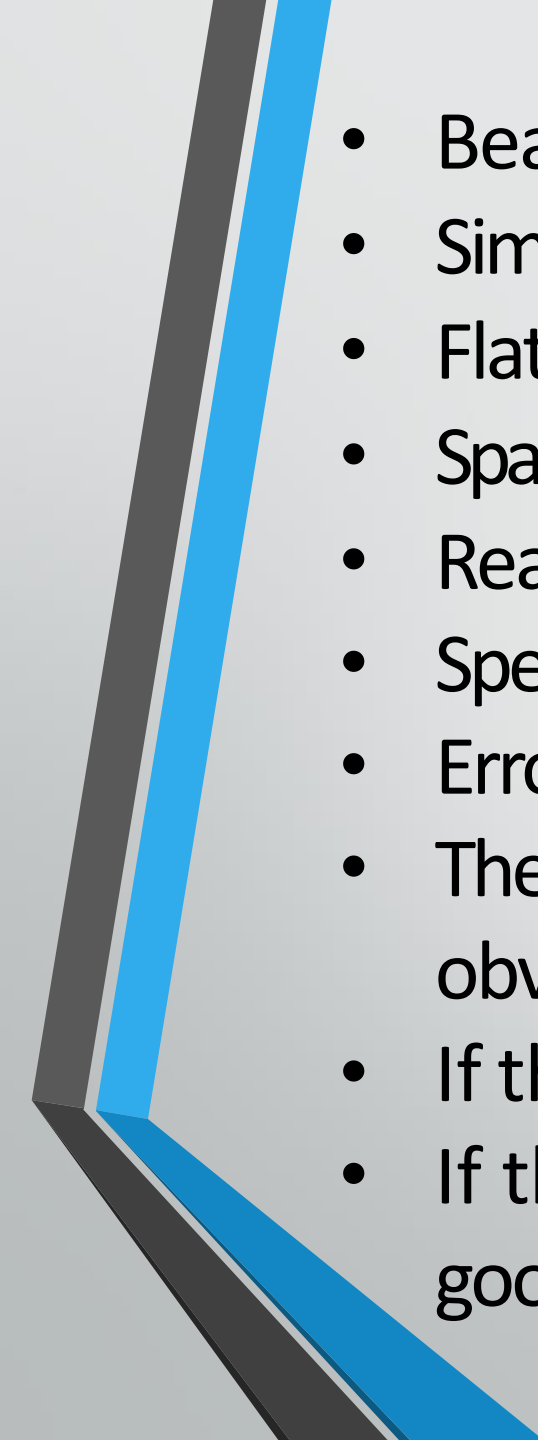
Portable

High level

Able to talk to Fortran, C++ & C,

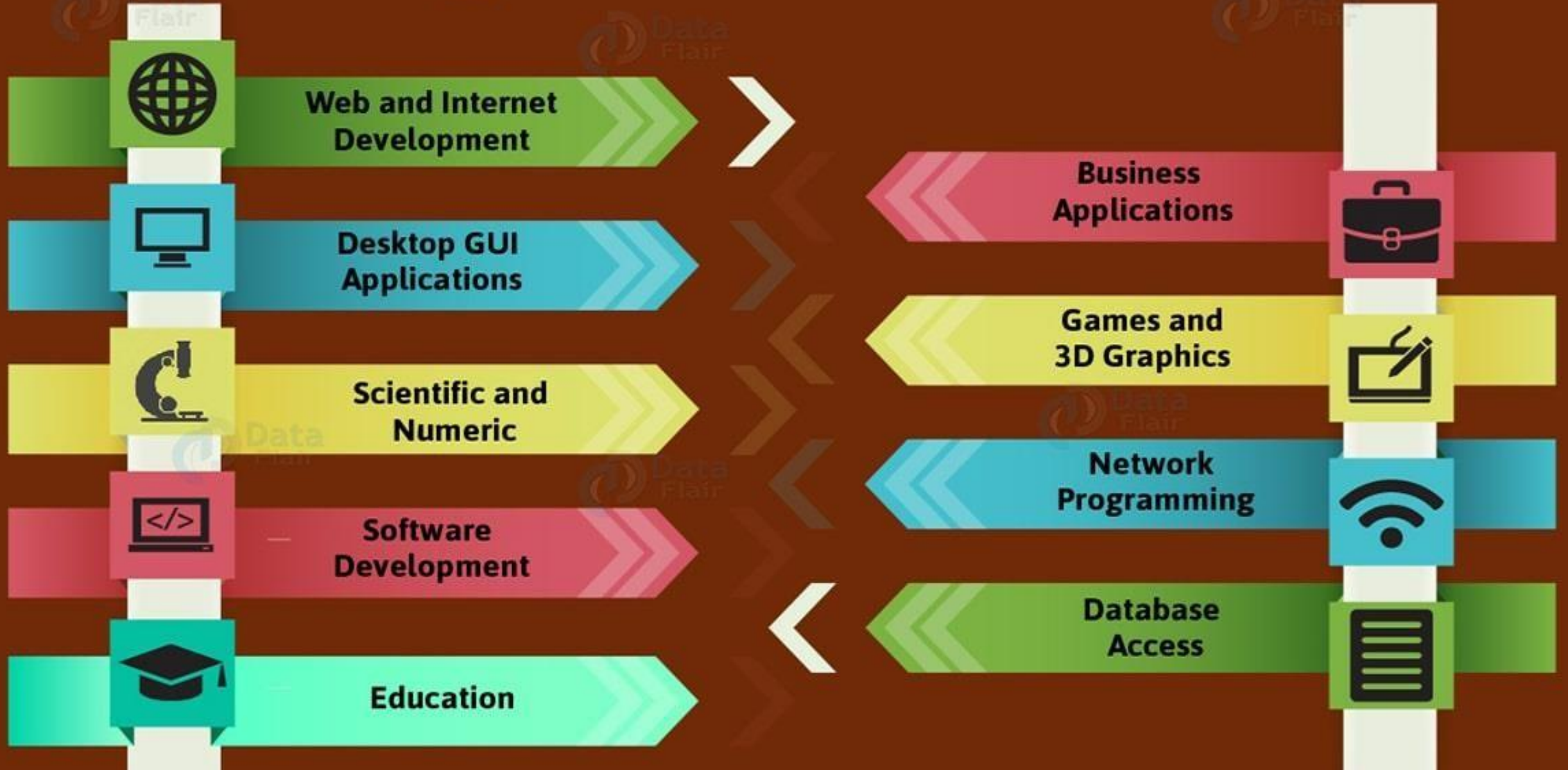
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- It Is Free
 - Integration Feature
 - It Needs Less Coding
 - Big Giants Are Using It
 - Extensive Support Libraries
 - It Is One Of The Most Trending Languages

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- Beautiful is better than ugly.
 - Simple is better than complex.
 - Flat is better than nested.
 - Sparse is better than dense.
 - Readability counts.
 - Special cases aren't special enough to break the rules.
 - Errors should never pass silently.
 - There should be one—and preferably only one—obvious way to do it,
 - If the implementation is hard to explain, it's a bad idea.
 - If the implementation is easy to explain, it may be a good idea.



Python Applications



Who uses python?



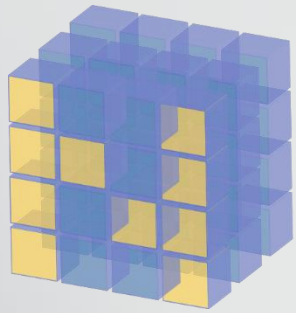
Instagram



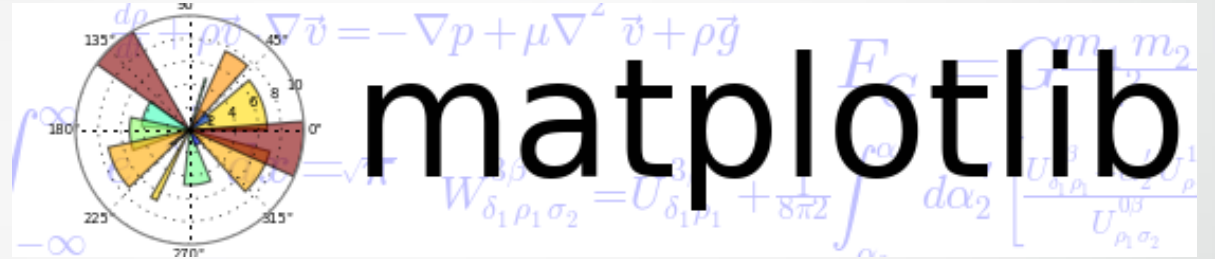
Worldwide, Sept 2020 compared to a year ago:

Rank	Change	Language	Share	Trend
1		Python	31.56 %	+2.9 %
2		Java	16.4 %	-3.1 %
3		Javascript	8.38 %	+0.3 %
4		C#	6.5 %	-0.8 %
5		PHP	5.85 %	-0.5 %
6		C/C++	5.8 %	+0.0 %
7		R	4.08 %	+0.3 %
8		Objective-C	2.79 %	+0.2 %
9		Swift	2.35 %	-0.1 %
10		TypeScript	1.92 %	+0.1 %
11		Matlab	1.65 %	-0.1 %
12		Kotlin	1.61 %	+0.1 %

Useful libraries in Data Science & Statistics



NumPy

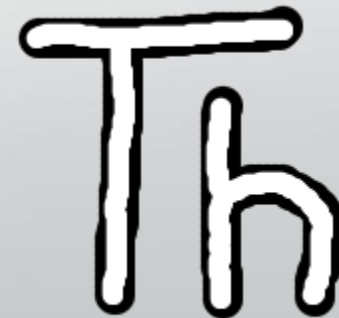


pandas

$$y_{it} = \beta' x_{it} + \mu_i + \epsilon_{it}$$

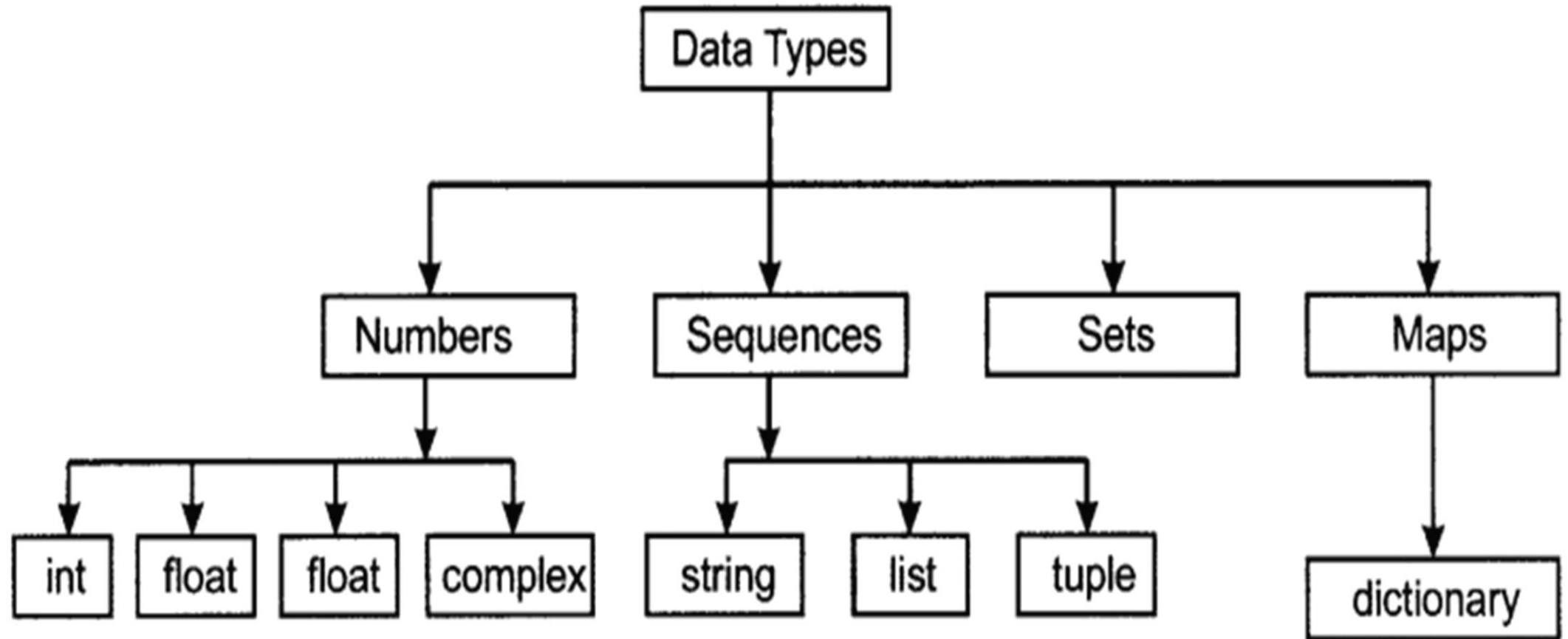


Python Distributions & IDEs



Introduction to anaconda & jupyter

- How to install anaconda on windows
- Jupyter environment
- Let's do some python 😊



Python Data types

Example	Data Type
<code>x = "Hello World"</code>	str
<code>x = 20</code>	int
<code>x = 20.5</code>	float
<code>x = 1j</code>	complex
<code>x = ["apple", "banana", "cherry"]</code>	list
<code>x = ("apple", "banana", "cherry")</code>	tuple
<code>x = range(6)</code>	range
<code>x = {"name" : "John", "age" : 36}</code>	dict
<code>x = {"apple", "banana", "cherry"}</code>	set

Programming

Writing code

Googling

