Artificial Intelligence
Fundamental with **Python**

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Python for AI/ML

Python

Python is an interpreted high-level general-purpose programming language.

The Zen of Python

Principles for Python's design into 20 aphorisms, only 19 of which have been written down.

1. Beautiful is better than ugly.

2. Explicit is better than implicit.

3. Simple is better than complex.

4. Complex is better than complicated.

5. Flat is better than nested.

6. Sparse is better than dense.

7. Readability counts.

8. Special cases aren't special enough to break the rules.

9. Although practicality beats purity.

10. Errors should never pass silently.

11. Unless explicitly silenced.

12. In the face of ambiguity, refuse the temptation to guess.

13. There should be one — and preferably only one — obvious way to do it.

14. Although that way may not be obvious at first unless you're Dutch.

15. Now is better than never.

16. Although never is often better than *right* now.

17. If the implementation is hard to explain, it's a bad idea.

18. If the implementation is easy to explain, it may be a good idea.

19. Namespaces are one honking great idea -- let's do more of those!

Why Python for AI/ML

Python has several features suited for learning and doing
Artificial Intelligence and Machine Learning

Why Python for AI/ML

- It's **free** and **open sources**

- It's relatively **simple to code** in and **understand**

- It has lots of useful AI/ML related **libraries**

Why Python for AI/ML

- Python as **Glue**

- Solving the "**Two-Language**" Problem, Research and Production

- **Large** and **active** ecosystem of **third-party packages**

Why Python for AI/ML

- AI/ML is **iterative processes**, python give the ability to **interact** and **iterative** directly with the code, using a terminal or Jupyter Notebook

Python for AI/ML

Essential Python language for AI/ML ecosystem

Python Basic
for working with AI/ML

1. Whitespace Formatting
2. Modules
3. Functions
4. Strings
5. Exceptions
6. Lists
7. Tuples
8. Dictionaries
9. Counters
10. Sets
11. Control Flow
12. Truthiness

More advanced Python features
that useful for working with AI/ML

1. Sorting

2. List Comprehensions

3. Automated Testing and assert

4. Object-Oriented Programming

5. Iterables and Generators

6. Randomness

7. Regular Expressions

8. zip and Argument Unpacking

9. args and kwargs

10. Type Annotations

Great place to start to learn Python

- http://learnpython.org/

- python.org, the official tutorial

Weekly Open Questions

Reply through @thefutureisdata

How Python is used in AI/ML?

Python ถูกใช้ในงาน Artificial Intelligence และ
Machine Learning อย่างไร?

Q7

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