

Python数据分析

概述Python语言特性

介绍Python数据处理技术

The Zen of Python

- **import this**
- Python features
 - Iterator: comprehensions, generator, simple data structure
 - Functional programming: MapReduce, lambda expression, decorator, partial function
 - Object-oriented programming: class(类), instance(实例), polymorphism(多态), inheritance(继承)
 - Tools: regex, datetime, collections, itertools...

Fetch datasets in Python

- Excel/CSV: relation model
- `pd.read_excel(filename, header=None)`
- `pd.read_csv(filename)`

10 minutes to pandas

- 今日加餐：文档阅读指南
- [10 minutes to pandas — pandas 1.4.0 documentation](#)

Matplotlib绘图

- [Examples — Matplotlib 3.5.1 documentation](#)
- More in seaborn

Third-party Python library

- Scikit-learn: traditional machine learning
- Scrapy: web scraping library
- Selenium: web browser simulation
- BeautifulSoup4: HTML/XML analysis
- And more
 - Web project deployment: django, flask...
 - Library supporting glue language feature: pyspark, pymysql...
 - Scientific computation: scipy
 - Image processing: OpenCV, Pillow