

Data Science Route

Timothy Wang

Python Basics

- Introduction to Python, The Scientific Libraries, Advanced Python Programming, and the Pandas Section of Data and Empirics: [Link](#)
- Chapters 1 – 4 in this book: [Link](#)
- Then this Pandas tutorial: [Link](#)
- Here are some excellent pandas code examples: [Link](#)

Math

Linear Algebra

- Essence of Linear Algebra: [Link](#)
- Khan Academy: [Link](#)
- Intuitive Guide to Linear Algebra: [Link](#)
- Introduction to Methods to Applied Mathematics: [Link](#)
- Mathematical Tools for Physics: [Link](#)
- Linear Algebra Reference: [Link](#)
- Reference: [Link](#)

Calculus

- Essence of Calculus: [Link](#)
- Khan Academy – Calculus 1: [Link](#)
- Khan Academy – Calculus 2: [Link](#)
- Khan Academy – Multivariable Calculus: [Link](#)

More Python

Practice Python Projects

- Projects List: [Link](#)
- Project Euler: [Link](#)
- Examples (Chapter 6 and 7): [Link](#)

Data Exploration

- Data visualization: [Link](#)
- Kaggle: [Link](#)

Probability and Statistics

Basics

- Khan Academy: [Link](#)
- Probability and Statistics for Programmers: [Link](#)
- Applied Statistics: [Link](#)
- Probability Cheat sheet: [Link](#)

Statistical Learning

- An Introduction to Statistical Learning: [Link](#)
- Elements of Statistical Learning: [Link](#)

Python and Data Science

Basics

- Chapter 5 Python Data Science Handbook: [Link](#)
- Tutorials: [Link](#)

Data Structures and Algorithms in Python

- Udacity: [Link](#)
- Runestone Academy: [Link](#)

TensorFlow

- Google Crash Course: [Link](#)

SQL

- Khan Academy: [Link](#)

Git and Version Control

- Pro Git: [Link](#)

Open Courseware

- Harvard Data Science course: [Link](#)

R

- Tutorials: [Link](#)

Supplementary Material

- Python 3 Documentation: [Link](#)
- Python Reddit: [Link](#)
- Data Science Reddit: [Link](#)
- Python Stack overflow: [Link](#)
- Data Science Stack Exchange: [Link](#)
- Jupyter: [Link](#)
- How to think like a Computer Scientist: [Link](#)