Python for Data Science

1. **Python Setup**
   1.1. Python installation
   1.2. Environment Selection
   1.3. Jupyter Notebooks

2. **Objects and Data Structure Basics**
   2.1. Numbers
   2.2. Strings
   2.3. Lists
   2.4. Tuples
   2.5. Dictionaries
   2.6. Sets
   2.7. Booleans
   2.8. Files
   2.9. Practice Interview Questions

3. **Comparison Operators**
   3.1. Basic Operators
   3.2. Chained Comparison Operators
   3.3. Practice Interview Questions

4. **Python Statements**
   4.1. if, elif & else
   4.2. for loops
   4.3. while loops
   4.4. range()
   4.5. List Comprehensions
   4.6. Practice Interview Questions

5. **Methods and Functions**
   5.1. Methods
   5.2. Functions
   5.3. Lambda Expressions
   5.4. Nested Statements
   5.5. Scope
   5.6. Practice Interview Questions

6. **First Milestone Project**

7. **Debugging**

8. **Object Oriented Programming**
   - 8.1. Objects
   - 8.2. Classes
   - 8.3. Methods
   - 8.4. Inheritance
   - 8.5. Special Methods
   - 8.6. Practice Interview Questions

9. **Error and Exception Handling**
   - 9.1. Errors
   - 9.2. Exceptions
   - 9.3. try
   - 9.4. except
   - 9.5. finally
   - 9.6. Practice Interview Questions

10. **Second Milestone Project**

11. **Modules and Packages**
    - 11.1. Creating Modules
    - 11.2. Installing Modules
    - 11.3. Exploring the Python Ecosystems
    - 11.4. Practice Interview Questions

12. **Built-in Functions**
    - 12.1. map
    - 12.2. reduce
    - 12.3. filter
    - 12.4. zip
    - 12.5. enumerate
    - 12.6. all and any
    - 12.7. complex
    - 12.8. Practice Interview Questions

13. **Decorators in Python**

14. **Python Generators**
    - 14.1. Iteration vs Generation
    - 14.2. Creating Generators

14.3. Practice Interview Questions

15. Writing test cases and Unittesting

16. Third Milestone Project

17. Introduction to Algorithms and Advanced Data Structures in Python

17.1. Searching Algorithms (Linear Search and Binary Search)
17.2. Some more Data Structures (Stack, Queue, Linked list)
17.3. Sorting Algorithms (Bubble, Selection, Insertion, Merge, and Quick Sorts)

18. Solving 100+ Python Interview Questions

19. Data Science using Python

19.1. Introduction to Numpy
19.2. Data Handling using Pandas
19.3. Plotting Data using Matplotlib
19.4. Introduction to Machine Learning using scikit-learn
19.5. Database interaction with Python (SQLAlchemy, SQLite)

20. A few more advanced topics

20.1. Regular expressions
20.2. Multithreading and multiprocessing
20.3. Web scraping with BeautifulSoup
20.4. Introduction to web development with Flask or Django

21. 100+ projects using the concepts learned so far

22. 10,000+ jobs are waiting for you - Start Working as a Python Developer