

Complete Python Roadmap: Beginner to Master

Beginner Level

- Introduction to Python
- Basic Syntax
- Data Types
- Operators
- Control Flow
- Data Structures
- Functions
- String Handling
- Basic File I/O
- Exception Handling

Intermediate Level

- Object-Oriented Programming (OOP)
- Modules and Packages
- Virtual Environments
- Pythonic Features
- Decorators and Closures
- Generators and Iterators
- Error Handling Best Practices
- Unit Testing
- Comprehensions Deep Dive
- Context Managers

Advanced Level

- Advanced OOP
- Functional Programming
- Concurrency and Parallelism
- Typing and Annotations
- Memory Management

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- Descriptors and Properties
- Advanced Decorators
- Data Classes
- Serialization
- Debugging & Profiling

Master Level

- CPython Internals
- Memory Optimization
- Custom Imports
- Writing C Extensions
- JIT and Alternative Runtimes
- Metaprogramming
- Build Tools and Packaging
- Security
- Best Practices and Design Patterns
- Domain-Specific Mastery (Optional paths)