Course Overview

Advanced Python Programming

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Valerio Velardo - The Sound of AI

Who's this course for?

- CS / tech students

- Data scientists

- ML Engineers

- Junior / mid level software engineers

- Experienced programmers can also benefit

Prerequisites

- Intermediate level in Python

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- Be familiar with:

  - Basic Python syntax

  - Lists, dictionaries, tuples, …

  - Functions

  - Classes

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- Design and build data pipelines

What concepts will I learn?

- Data Transfer Objects
- Annotations
- Data classes
- Pydantic
- Custom exceptions
- Serialization (pickle, yaml, json, joblib)
- Abstract classes / methods
- Polymorphism
- List / dictionary comprehensions
- Class iterators
- Generators
- Lambda functions
- Filter, reduce, map, zip
- Context managers
- Decorators
- Threading
- Multiprocessing

Course structure

1. Advanced Python concepts

2. Project: Data Pipeline

Types of lessons

- Step-by-step tutorials

- Theoretical / conceptual lessons (slides)

- Code show and tell

Lesson structure

- Video

- Additional learning resources

- Exercises

Where can I find code / slides?

- Dedicated [repo](#) on GitHub

- 1 directory per lesson:

  - Code

  - *exercise.py*

  - Slide presentation

- Data Pipeline project in 1 directory

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- Do exercises

Join the community!

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