Data Transfer Objects

Advanced Python Programming

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Valerio Velardo - The Sound of AI

What’s a Data Transfer Object?

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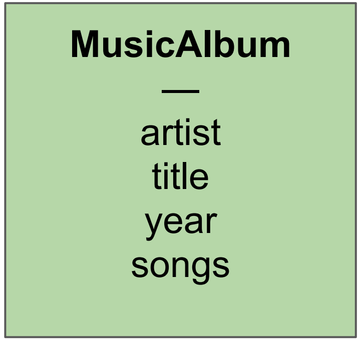
- No behaviour
- Transfer data between different processes

Music Album DTO

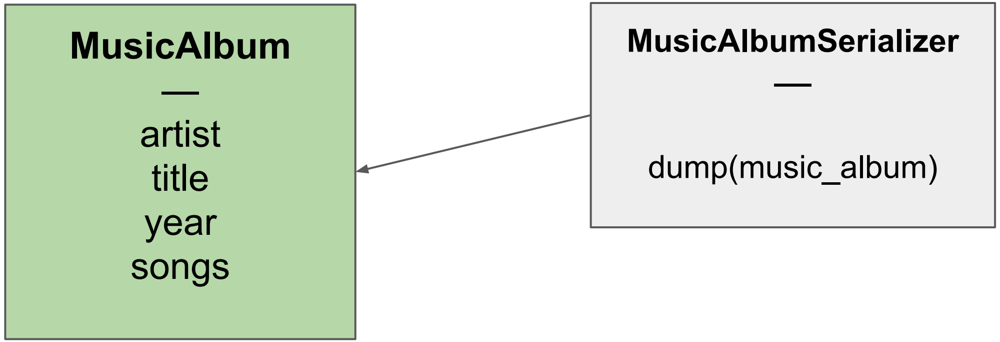


MusicAlbum

—

artist
title
year
songs

Music Album DTO



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MusicAlbumSerializer

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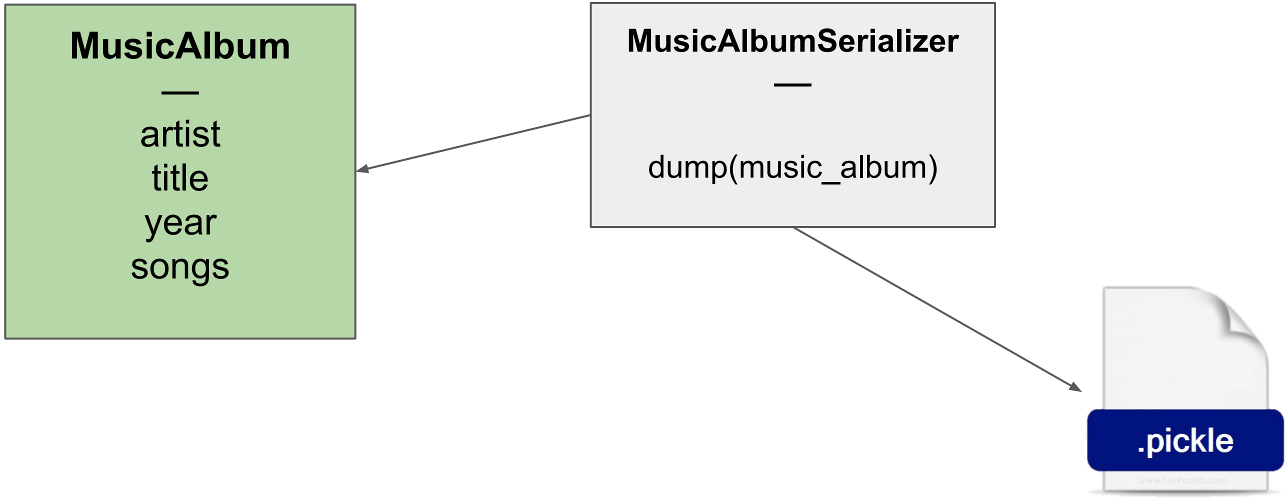
dump(music_album)

Music Album DTO



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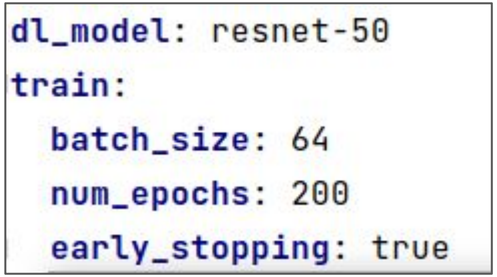

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dl_model: resnet-50
train:
  batch_size: 64
  num_epochs: 200
  early_stopping: true
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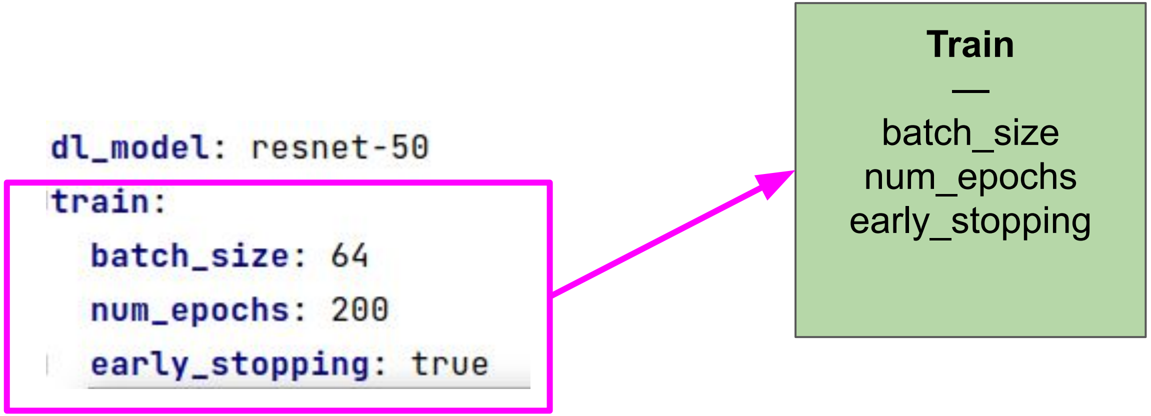

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Train

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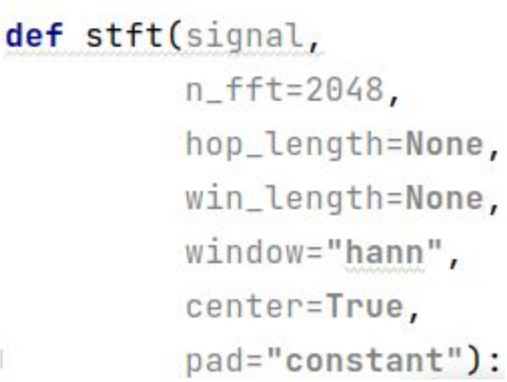

```
def stft(signal,
         n_fft=2048,
         hop_length=None,
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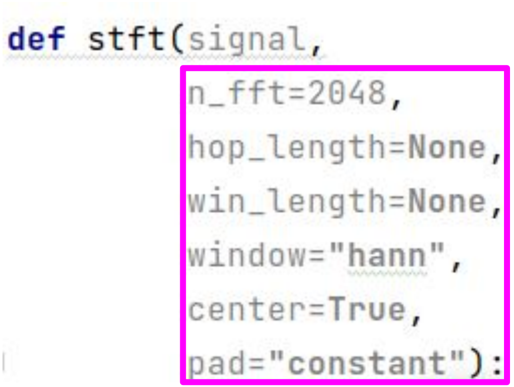

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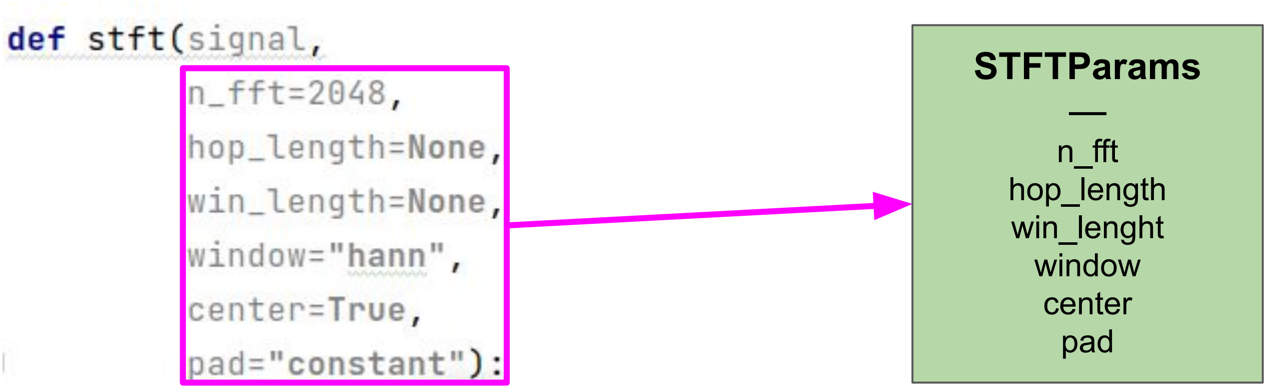

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STFTParams

—

n_fft
hop_length
win_lenght
window
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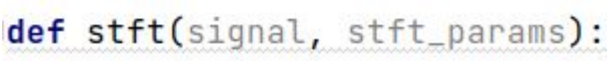

```
def stft(signal, stft_params):
```

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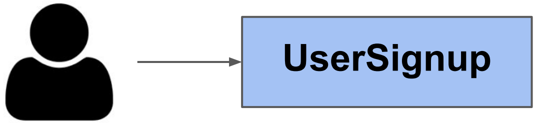

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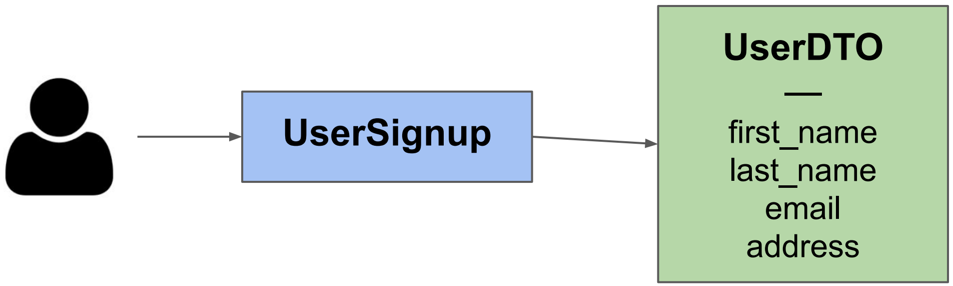

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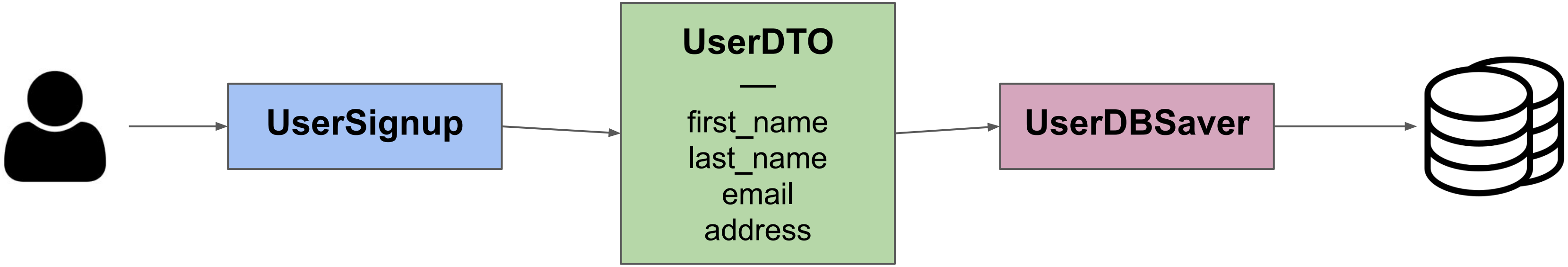

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- Python *data classes*
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- *pydantic* objects
  - Python package for data validation
  - __init__, __str__, __eq__ come for free
  - Enforce type hints