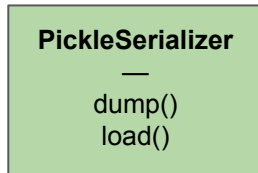# Polymorphism and Abstract Classes
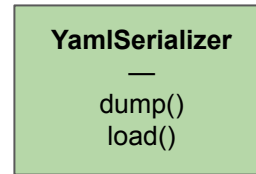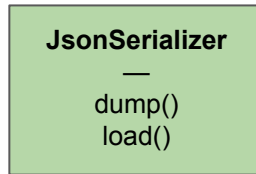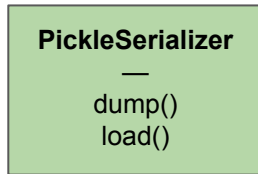
Advanced Python Programming

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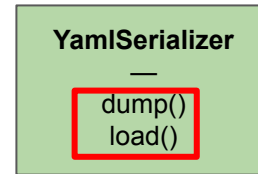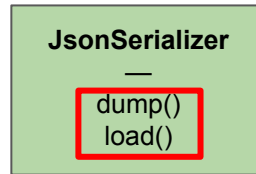Valerio Velardo - The Sound of AI

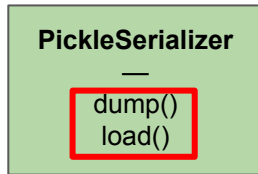# Serialization: Class diagram
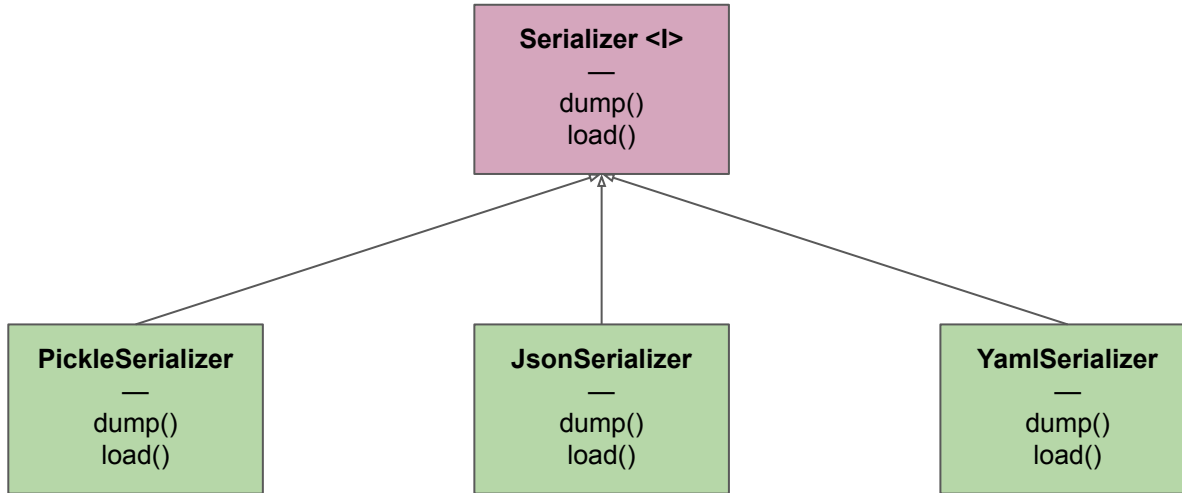
PickleSerializer
—
dump()
load()

Serialization: Class diagram

PickleSerializer
—
dump() load()

JsonSerializer
—
dump() load()

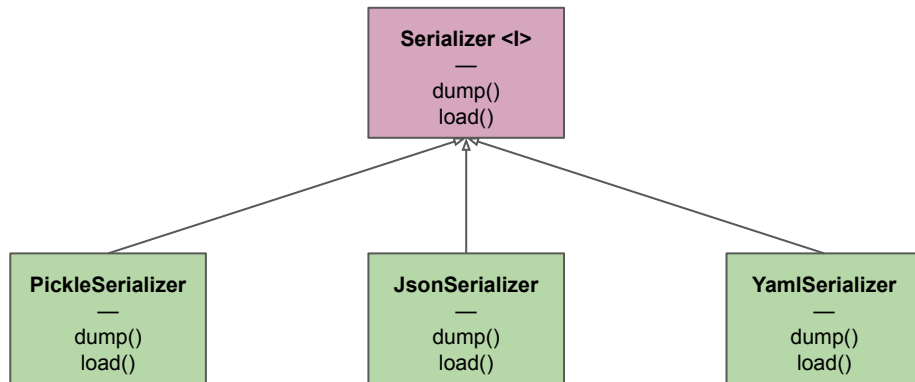| YamlSerializer |
| :---: |
| — |
| dump()
load() |

Serialization: Class diagram

Serialization: Class diagram

Polymorphism

- Single abstract interface

- Sub-classes inherit from abstraction

- Different implementation of interface for each subclass

Advantages of polymorphism

- Code reusability

- Facilitate code extension (open-closed principle)

Python abstract classes

- ABC, @abstractmethod -> from *abc* package

- Provide blueprint for classes

- Abstract method has declaration -> no implementation

- Subclasses should implement abstract methods