

# Type safe config parsing using Python

Python  $\geq$  3.8

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# Common Formats

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- json
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- ini
- toml
- pyhocon

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- HOCON is used quite a bit in Java and Scala.
- pureconfig in Scala allows for easy, type safe configuration parsing.

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# Why use dataconf?

If you have ever parsed a config in Python, you will know adding in type checking and checking for missing keys can be overly verbose. However, this has been primarily an issue with Python. In Scala, we can use HOCON, pureconfig, and case classes to easily load in configuration files handling all the necessary checks.

Up until Python 3.7, this wasn't builtin. Since the introduction of dataclasses, we can now have the same easy of use as our friends in JVM based languages.



# Config

```
{  
  name: Test Model  
  date: 20211010  
  input-source {  
    table-name: db.table  
    filter: "par_day between 20210101 and 20210102"  
  }  
  output-path: /some/dir/folder  
}
```

# Scala Implementation

```
case class InputType(  
  tableName: String,  
  filter: String  
)  
  
case class Params(  
  name: String,  
  date: Int,  
  inputSource: InputType,  
  outputPath: String  
)  
  
val conf = ConfigSource.file(myPath)  
  .loadOrThrow[Params]
```

# Python Implementation

```
@dataclass
class InputType:
    table_name: Text
    filter: Text

@dataclass
class Params:
    name: Text
    date: int
    input_source: InputType
    output_path: Text

conf = dataconf.file(my_path, Params)
```

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Links to referenced libraries.

- Demo dataconf
- dataconf
- PyHOCON
- HOCON
- pureconfig