

# Loading settings from environment variables with Pydantic dataclasses

# Without Pydantic



```
from os import getenv

HOST = getenv("APP_HOST")
PORT = int(getenv("APP_PORT"))
START = bool(int(getenv("APP_START", 1)))

print("App host:", HOST)
print("App port:", PORT)
print("App start:", START)
```

# With Pydantic



```
from pydantic import BaseSettings
```

```
class MySettings(BaseSettings):  
    host: str  
    port: int  
    start: bool = True
```

```
class Config:  
    env_prefix = "APP_"
```

```
settings = MySettings()
```

```
print("App host:", settings.host)  
print("App port:", settings.port)  
print("App start:", settings.start)
```

# Without Pydantic

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from os import getenv

HOST = getenv("APP_HOST")
PORT = int(getenv("APP_PORT"))
START = bool(int(getenv("APP_START", 1)))

print("App host:", HOST)
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# With Pydantic

```
from pydantic import BaseSettings

class MySettings(BaseSettings):
    host: str
    port: int
    start: bool = True

    class Config:
        env_prefix = "APP_"

settings = MySettings()

print("App host:", settings.host)
print("App port:", settings.port)
print("App start:", settings.start)
```

# Installing

```
pip install pydantic
```

```
conda install -c conda-forge pydantic
```

**+ Support for loading from .env files:**

```
pip install python-dotenv
```

```
conda install -c conda-forge python-dotenv
```

# Loading settings from .env file

```
# pip install python-dotenv

from pydantic import BaseSettings

class MySettings(BaseSettings):
    host: str
    port: int
    start: bool = True

    class Config:
        env_prefix = "APP_"
        env_file = ".env"

settings = MySettings()

print("App host:", settings.host)
print("App port:", settings.port)
print("App start:", settings.start)
```

# Running app loading settings from...

## CLI

```
APP_HOST=0.0.0.0 APP_PORT=8080 APP_START=1 ↵  
python my_app.py
```

## .env file

*# .env file (inside same path as script/app):*

```
APP_HOST=0.0.0.0  
APP_PORT=8080  
APP_START=1 *
```

\* boolean values can be specified as strings ( =true / =false )

# Pros and Cons

- Validation
- Parsing
- Group settings in classes
- Definition of default settings
- Use built-in Typing support



- Performance?
- Extra dependency,  
extra size

