

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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With Pydantic

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settings = MySettings()
print("App host:", settings.host)
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```



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
- Hinting on IDE (PyCharm Pydantic plugin)
- Use built-in Typing support



- Performance?
- Extra dependency,
extra size

