

```
!pip install fastapi uvicorn scikit-learn joblib numpy pyngrok
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Requirement already satisfied: fastapi in /usr/local/lib/python3.12/dist-packages (0.123.10)
Requirement already satisfied: uvicorn in /usr/local/lib/python3.12/dist-packages (0.38.0)
Requirement already satisfied: scikit-learn in /usr/local/lib/python3.12/dist-packages (1.6.1)
Requirement already satisfied: joblib in /usr/local/lib/python3.12/dist-packages (1.5.3)
Requirement already satisfied: numpy in /usr/local/lib/python3.12/dist-packages (2.0.2)
Collecting pyngrok
  Downloading pyngrok-7.5.0-py3-none-any.whl.metadata (8.1 kB)
Requirement already satisfied: starlette<0.51.0,>=0.40.0 in /usr/local/lib/python3.12/dist-packages (from fastapi) (0.5)
Requirement already satisfied: pydantic!=1.8,!>1.8.1,!>2.0.0,!>2.0.1,!>2.1.0,<3.0.0,>=1.7.4 in /usr/local/lib/python3.1
Requirement already satisfied: typing-extensions>=4.8.0 in /usr/local/lib/python3.12/dist-packages (from fastapi) (4.15)
Requirement already satisfied: annotated-doc>=0.0.2 in /usr/local/lib/python3.12/dist-packages (from fastapi) (0.0.4)
Requirement already satisfied: click>=7.0 in /usr/local/lib/python3.12/dist-packages (from uvicorn) (8.3.1)
Requirement already satisfied: h11>=0.8 in /usr/local/lib/python3.12/dist-packages (from uvicorn) (0.16.0)
Requirement already satisfied: scipy>=1.6.0 in /usr/local/lib/python3.12/dist-packages (from scikit-learn) (1.16.3)
Requirement already satisfied: threadpoolctl>=3.1.0 in /usr/local/lib/python3.12/dist-packages (from scikit-learn) (3.6)
Requirement already satisfied: PyYAML>=5.1 in /usr/local/lib/python3.12/dist-packages (from pyngrok) (6.0.3)
Requirement already satisfied: annotated-types>=0.6.0 in /usr/local/lib/python3.12/dist-packages (from pydantic!=1.8,!>
Requirement already satisfied: pydantic-core==2.41.4 in /usr/local/lib/python3.12/dist-packages (from pydantic!=1.8,!>
Requirement already satisfied: typing-inspection>=0.4.2 in /usr/local/lib/python3.12/dist-packages (from pydantic!=1.8,
Requirement already satisfied: anyio<5,>=3.6.2 in /usr/local/lib/python3.12/dist-packages (from starlette<0.51.0,>=0.40
Requirement already satisfied: idna>=2.8 in /usr/local/lib/python3.12/dist-packages (from anyio<5,>=3.6.2->starlette<0.
Downloading pyngrok-7.5.0-py3-none-any.whl (24 kB)
Installing collected packages: pyngrok
Successfully installed pyngrok-7.5.0
```

```
from sklearn.datasets import load_iris
from sklearn.ensemble import RandomForestClassifier
import joblib

X, y = load_iris(return_X_y=True)

model = RandomForestClassifier()
model.fit(X, y)

joblib.dump(model, "model.pkl")
```

```
['model.pkl']
```

```
%%writefile main.py
from fastapi import FastAPI
from pydantic import BaseModel
import joblib
import numpy as np

app = FastAPI(title="ML Model API")

model = joblib.load("model.pkl")

class InputData(BaseModel):
    features: list

@app.get("/")
def home():
    return {"message": "ML Model API is running"}

@app.post("/predict")
def predict(data: InputData):
    features = np.array(data.features).reshape(1, -1)
    prediction = model.predict(features)
    return {"prediction": int(prediction[0])}
```

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Writing main.py
```

```
from pyngrok import ngrok
ngrok.set_auth_token("38ANhSL3dpvzyhn5JF3HiVvbN1y_duwCe8u46RVaRTtYkVKP")
```

```
import threading
import uvicorn
from pyngrok import ngrok

# Open ngrok tunnel
public_url = ngrok.connect(8000)
print("Public URL:", public_url)

# Run FastAPI in a thread
def run():
    uvicorn.run("main:app", host="0.0.0.0", port=8000)
```

```
thread = threading.Thread(target=run)
thread.start()
```

Public URL: NgrokTunnel: "<https://nonastronomically-unsegregative-javion.ngrok-free.dev>" -> "<http://localhost:8000>"

Start coding or generate with AI.