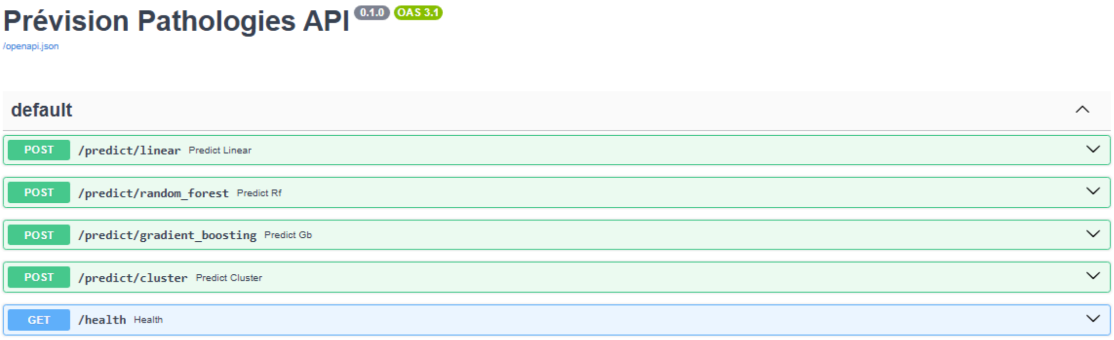
Swagger:



Prévision Pathologies API 0.1.0 OAS 3.1

/openapi.json

default

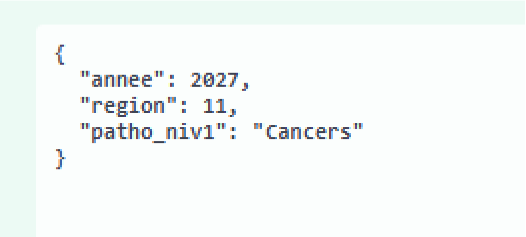
POST /predict/linear Predict Linear

POST /predict/random_forest Predict Rf

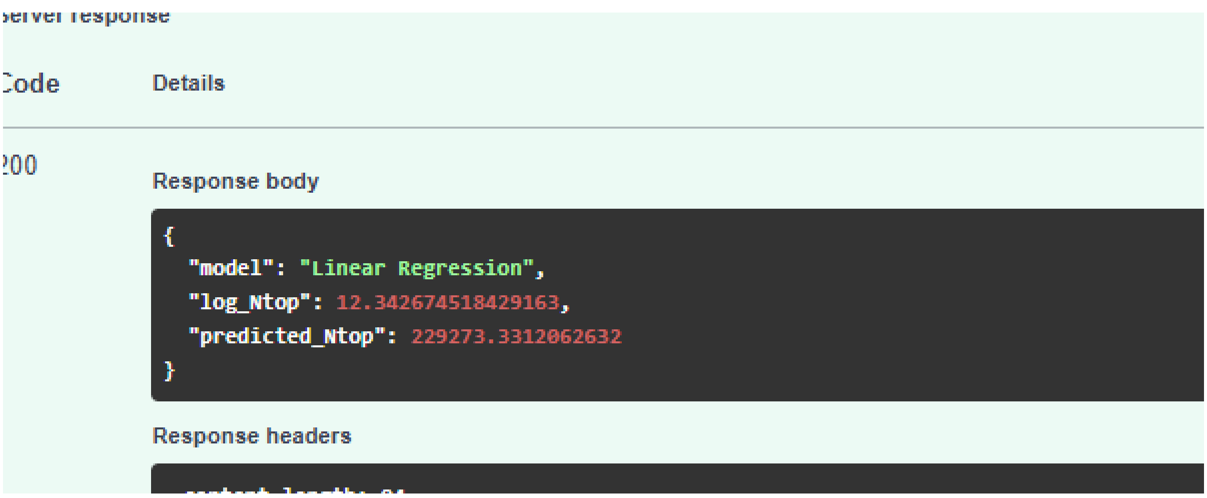
POST /predict/gradient_boosting Predict Gb

POST /predict/cluster Predict Cluster

GET /health Health



```
{
  "annee": 2027,
  "region": 11,
  "patho_niv1": "Cancers"
}
```



Server response

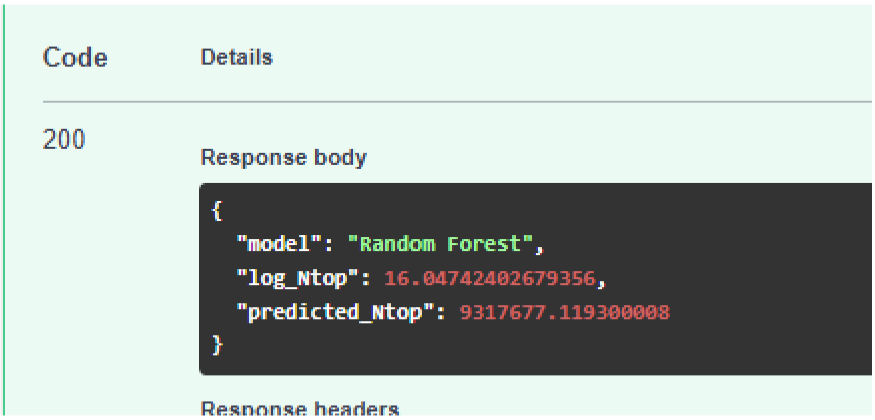
Code Details

200

Response body

```
{
  "model": "Linear Regression",
  "log_Ntop": 12.342674518429163,
  "predicted_Ntop": 229273.3312062632
}
```

Response headers



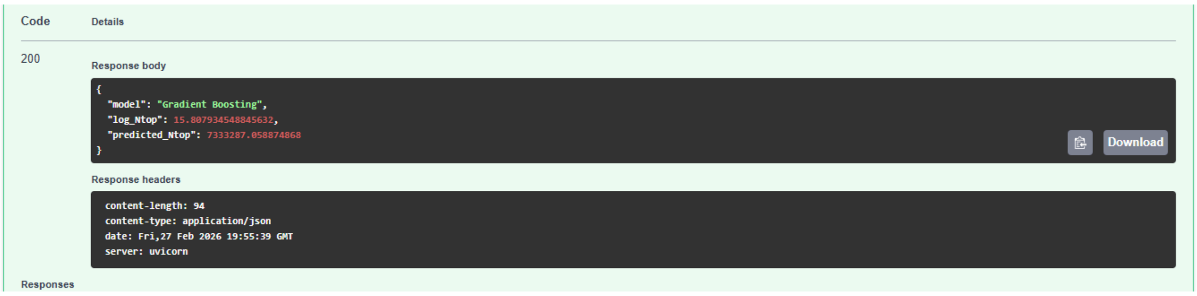
Code Details

200

Response body

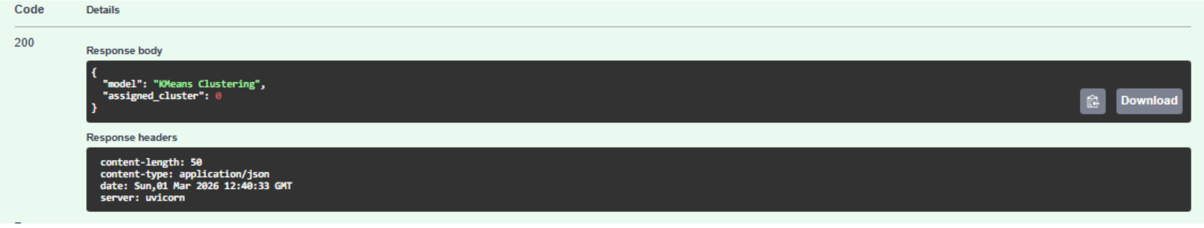
```
{
  "model": "Random Forest",
  "log_Ntop": 16.04742402679356,
  "predicted_Ntop": 9317677.119300008
}
```

Response headers



```
{
  "model": "Gradient Boosting",
  "log_Ntop": 15.807934548845632,
  "predicted_Ntop": 7333287.058874868
}
```

```
content-length: 94
content-type: application/json
date: Fri,27 Feb 2026 19:55:39 GMT
server: uvicorn
```

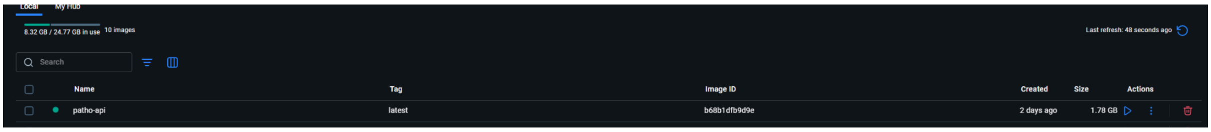


```
{
  "model": "KMeans Clustering",
  "assigned_cluster": 0
}
```

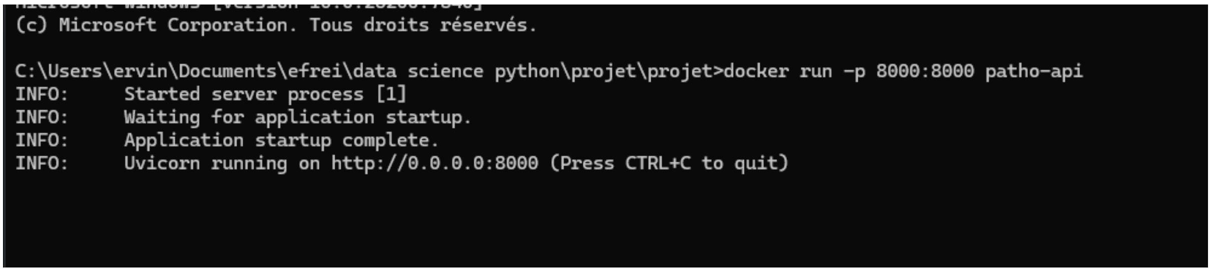
```
content-length: 50
content-type: application/json
date: Sun,01 Mar 2026 12:40:33 GMT
server: uvicorn
```

La Régression Linéaire est complètement à l'écart (environ 229k vs environ 7-9M), ce qui est cohérent avec son R^2 de 0.156 elle ne sert à rien ici. RF et GB convergent vers le même ordre de grandeur (environ 7-9M), ce qui confirme leur fiabilité. L'écart entre RF et GB (environ 2M) est normal deux algorithmes différents, GB étant légèrement plus conservateur.

Docker:



		Name	Tag	Image ID	Created	Size
□	●	patho-api	latest	b68b1dfb9d9e	2 days ago	1.78 GB



```
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C:\Users\ervin\Documents\efrei\data science python\projet\projet>docker run -p 8000:8000 patho-api
INFO:     Started server process [1]
INFO:     Waiting for application startup.
INFO:     Application startup complete.
INFO:     Uvicorn running on http://0.0.0.0:8000 (Press CTRL+C to quit)
```