Diabetes Progression Prediction API ^1.0.0

OAS 3.1

/openapi.json

Educational ML inference API for predicting diabetes disease progression. This system uses a trained Lasso regression model with RFE feature selection. **Note:** This is for educational and demonstration purposes only. Not intended for clinical or diagnostic use.

Root ⌃

| GET | / | Root | ⌄ |

Health ⌃

| GET | /health | Health Check | ⌄ |

Model ⌃

| GET | /model/info | Model Info | ⌃ |

Get information about the loaded model. Returns model type, selected features, and preprocessing steps.

Parameters   [Try it out]

No parameters

Responses

Code	Description	Links
200	Successful Response	*No links*

Code	Description	Links

Media type

application/json

Controls `Accept` header.

Example Value   Schema

```
"string"
```

Prediction   ∧

POST	**/predict** Predict	∧

Make a diabetes progression prediction.

Input: Normalized feature values (10 features)

- age: Normalized age (-2.0 to 2.0)
- sex: Normalized sex (-0.05=Female, 0.05=Male)
- bmi: Normalized BMI (-2.5 to 3.0)
- bp: Normalized blood pressure (-2.0 to 3.0)
- s1-s6: Normalized blood measurements (-2.0 to 3.0)

Output: Disease progression prediction

- prediction: Predicted score (25 to 346)
- interpretation: Risk level (Low/Moderate/High)
- note: Usage disclaimer

Example Request:

```
{
    "age": 0.03,
    "sex": 0.05,
    "bmi": 0.06,
    "bp": 0.04,
    "s1": 0.02,
    "s2": 0.03,
    "s3": -0.02,
    "s4": 0.03,
    "s5": 0.05,
    "s6": 0.04
}
```

Parameters   Cancel

No parameters

Request body ^{required}

<div style="border:1px solid #333; padding:4px 12px; display:inline-block; float:right;">

application/json
</div>

Edit Value   Schema

```
{
  "age": 0,
  "sex": 0,
  "bmi": 0,
  "bp": 0,
  "s1": 0,
  "s2": 0,
  "s3": 0,
  "s4": 0,
  "s5": 0,
  "s6": 0
}
```

Execute	Clear

Responses

Curl

```
curl -X 'POST' \
  'http://127.0.0.1:8000/predict' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '{
"age": 0,
"sex": 0,
"bmi": 0,
"bp": 0,
"s1": 0,
"s2": 0,
"s3": 0,
"s4": 0,
"s5": 0,
"s6": 0
}'
```

Request URL

```
http://127.0.0.1:8000/predict
```

Server response

Code	Details

200

Response body

```json
{
  "prediction": 152.1010870520363,
  "interpretation": "Moderate Risk ⚠ ",
  "note": "Relative disease progression score (educational/demo       nl Download
}
```

Response headers

```
access-control-allow-credentials: true
access-control-allow-origin: http://127.0.0.1:8000
content-length: 144
content-type: application/json
date: Thu,25 Dec 2025 11:30:05 GMT
server: uvicorn
vary: Origin
```

Responses

Code	Description	Links

200 Successful Response   *No links*

Media type

```
application/json
```

Controls `Accept` header.

Example Value   Schema

```json
{
  "prediction": 0,
  "interpretation": "string",
  "note": "string"
}
```

422 Validation Error   *No links*

Media type

```
application/json
```

Example Value   Schema

```json
{
  "detail": [
    {
      "loc": [
        "string",
        0
      ],
      "msg": "string",
      "type": "string"
    }
  ]
}
```

POST   /predict/batch Predict Batch   ⌃

Make predictions for multiple patients at once.

Input: List of patient data (up to 100 patients) **Output:** List of predictions

Parameters   [Cancel]

No parameters

Request body ^{required}   [application/json]

Edit Value   Schema

```
[
  {
    "age": 0,
    "sex": 0,
    "bmi": 0,
    "bp": 0,
    "s1": 0,
    "s2": 0,
    "s3": 0,
    "s4": 0,
    "s5": 0,
    "s6": 0
  }
]
```

[Execute   ] [Clear   ]

Responses

Curl

```
curl -X 'POST' \
  'http://127.0.0.1:8000/predict/batch' \
  -H 'accept: application/json' \
  -H 'Content-Type: application/json' \
  -d '[
  {
    "age": 0,
    "sex": 0,
```

```
        "bmi": 0,
        "bp": 0,
        "s1": 0,
        "s2": 0,
        "s3": 0,
        "s4": 0,
        "s5": 0,
        "s6": 0
    }
  ]'
```

Request URL

```
http://127.0.0.1:8000/predict/batch
```

Server response

Code	Details

200

Response body

```
{
  "predictions": [
    {
      "prediction": 152.1010870520363,
      "interpretation": "Moderate Risk ⚠️ ",
      "note": "Relative disease progression score (educational/demo use only)"
    }
  ],
  "count": 1
}
```

Download

Response headers

```
access-control-allow-credentials: true
access-control-allow-origin: http://127.0.0.1:8000
content-length: 172
content-type: application/json
date: Thu,25 Dec 2025 11:30:20 GMT
server: uvicorn
vary: Origin
```

Responses

Code	Description	Links
200	Successful Response	*No links*

Media type

application/json

Controls `Accept` header.

Example Value   Schema

```
"string"
```

| 422 | Validation Error | *No links* |

Media type

Code	Description	Links

application/json

Example Value Schema

```
{
  "detail": [
    {
      "loc": [
        "string",
        0
      ],
      "msg": "string",
      "type": "string"
    }
  ]
}
```

Schemas ⌃

DiabetesInput ›   Expand all   `object`

HTTPValidationError ›   Expand all   `object`

HealthResponse ›   Expand all   `object`

PredictionOutput ›   Expand all   `object`

ValidationError ›   Expand all   `object`