

1.00 QAS

Predicts whether a student will be high-quality and likely to succeed.

[https://virtserver.swaggerhub.com/sunnyliang5/MyMicroservices-API/1.0.0 - SwaggerHub API Auto Mocking](https://virtserver.swaggerhub.com/sunnyliang5/MyMicroservices-API/1.0.0)

predict Predict application success

POST `/predict` Predict a student's success by ID

Using a ML model based on the parameters `studyttime`, `failures`, `absences`, `G1`, and `G2`, predict the quality of the student, specifically `G3`. A student predicted to have a `G3` grade of 15 or higher is high quality.

Parameters

Try it out

Name	Description
studytime * numeric (numeric) (task12) min/max: 0 missing: 0 na.rm: 0	weekly study time (numeric: 1 - <2 hours, 2 - 2 to 5 hours, 3 - 5 to 10 hours, or 4 - >10 hours) <input type="text"/> studytime
failures * numeric (numeric) (task12) min/max: 0 missing: 0 na.rm: 0	number of past class failures (numeric: 0 if Term3, else 4) <input type="text"/> failures
absences * numeric (numeric) (task12) min/max: 0 missing: 0 na.rm: 0	number of school absences (numeric: from 0 to 32) <input type="text"/> absences
G1 * numeric (numeric) (task12) min/max: 0 missing: 0 na.rm: 0	first period grade (numeric: from 0 to 20) <input type="text"/> G1
G2 * numeric (numeric) (task12) min/max: 0 missing: 0 na.rm: 0	second period grade (numeric: from 0 to 20) <input type="text"/> G2

Responses

Cards	Description	Links
200	successful operation <div> <div>What's new</div> <div> Application form </div> <div> Contact Service Support </div> <div>Example value Schema</div> <pre>{ "userId": 0, "firstName": 0, "lastName": 0, "password": 0, "id": 0, "city": 0 }</pre> </div>	No link
400	Invalid values supplied	No link
404	Values not found	No link

default

```
POST /train Train the student success predicting ML model
```

Train the ML model over a historical dataset (`data/student-mat.csv`) of student performance. Our ML model uses 5 inputs from the dataset: `studytime`, `failures`, `absences`, `g1`, and `g2`. The target performance metric of our model is `g3`. The data is in JSON format.

Parameters

Try it out

No parameters

Responses

The screenshot shows the AWS IAM console interface. At the top, there's a header with 'Create' and 'Description'. Below that, a message states 'successful operation'. Under the 'Details' tab, it shows 'User type' as 'applicationuser'. Below this, there's a section for 'Groups, Roles, Policies' with a 'Create' button. At the bottom, the 'Example Policy' is displayed, which is a JSON document granting permissions for 'iam:ListUsers' and 'iam:GetUser' on the '*' resource in the 'iam' service across all regions.

POST `/clean/` Clean the dataset in preparation to train the ML model

Before training our ML model on a dataset, we should clean the data. Remove corrupt, incorrect, or unnecessary data from the dataset (`data/student-mal.csv`), so that our ML model will have greater success

Recommendations

Page 38 of 40

No parameters

Responses

Code	Description	Links
200	successful operation	No error

Media type

application/json

Content: Microsoft Word

Example Value: *document*

```
{
  "userId": 0,
  "firstName": 0,
  "lastName": 0,
  "gender": 0,
  "id": 0,
  "tz": 0
}
```

POST `/test/` Test how the ML model performs

Run tests to test the classifier accuracy of our ML model

Parameters

Try it out

No parameters

Responses

A screenshot of the AWS IAM console. At the top, the 'Users' page is selected. A green banner at the top indicates a 'successful operation'. Below this, the 'applicationuser' user is highlighted in green. The 'Details' tab is active, showing the user's name, creation date, and status. The 'Groups' tab is also visible, showing the user is a member of the 'AWSManagedConsoleReadOnlyAccess' group. The 'Permissions' tab is also visible, showing the user has the 'AWSManagedReadOnlyAccess' policy attached.

Schemata

```
Predict (
  studytime      [...]
```