

Guideline to run the App for code test

Jiajun Wu

Quick Demo

I deployed this App on this website: <http://8.218.11.33:3000/>

MySQL Database

The default database connection parameters are:

Host: 127.0.0.1 User: mylearning Pass: mylearning Database: mylearning

Executing the `mylearning.sql` using the root user could build the user and database.

If you need to change the parameters, please edit both `backend/config.py` and `mylearning.sql`.

```
mysql> source /var/server/mylearning.sql
Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.00 sec)

Query OK, 0 rows affected (0.01 sec)
```

Tips: It is possible that the SQL command fails to create a user due to permission or password policy issues. Please create the user manually and grant the privileges then.

Permission

Please ensure the folders `backend/static/` and `backend/logs/` are writeable because they will be used to store logs, datasets and visualizations.

Backend

It is written with Python 3.8.

You may want to install the dependencies:

```
# cd backend
# pip3 install -r requirements.txt
```

It may take some time to finish. Then you can start the FastAPI backend:

```
# python3 main.py
```

```
root@iZj6c0tu43irjxqmlti72eZ:/var/server/backend# python3 main.py
db defined.
INFO: Started server process [48447]
INFO: Waiting for application startup.
INFO: Application startup complete.
INFO: Uvicorn running on http://127.0.0.1:8008 (Press CTRL+C to quit)
```

You may leave it running at the background but do not terminate it.

Frontend

It is tested with NodeJS latest LTS version: 18.12.1 (includes npm 8.19.2).

Tips: Old version NodeJS and npm may not build the project properly.

<https://github.com/nodesource/distributions/blob/master/README.md#deinstall>

The *node_modules* folder was removed before submission.

So you may want to reinstall the dependencies before the first run:

```
# cd ..  
# cd frontend  
# npm install
```

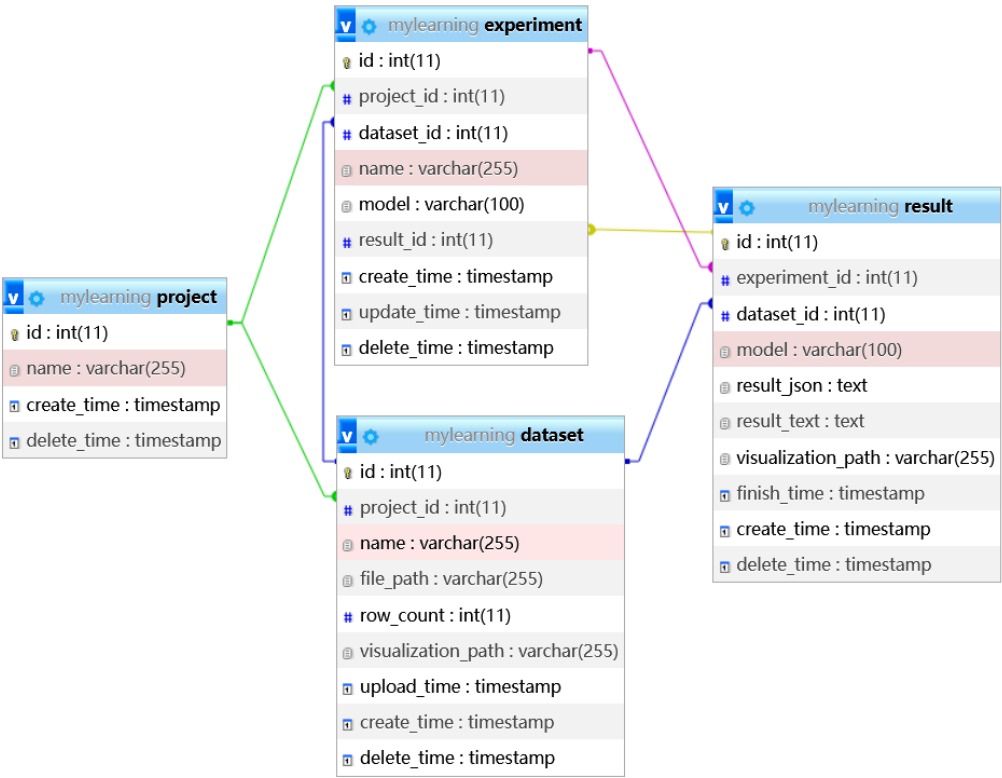
It may take some time to finish.

Then, you will see the *node_modules* folder was built. It could be started:

```
# npm start  
  
Compiled successfully!  
You can now view frontend in the browser.  
  
Local:      http://localhost:3000  
On Your Network: http://172.31.77.245:3000  
  
Note that the development build is not optimized.  
To create a production build, use npm run build.  
  
webpack compiled successfully
```

The default URL is <http://localhost:3000/>.

Database Structure















Screenshots

Machine Learning Toolkit

Homepage


My Projects

ID	Name	Datasets	Experiments	Control
4	My Test Project 4	0	0	  
3	My Test Project 3	0	0	  
2	My Test Project 2	0	3	  
1	My Test Project 1	4	1	  













CREATE A RECORD

Submitted by [Jiajun Wu](#) 2022.

Machine Learning Toolkit




My Test Project 1  GO BACK

Datasets

ID	Name	Rows	Upload Time	Control
8	My Dataset 8			  
7	My Dataset 7	100	2022-12-05T21:31:11	  
6	My Dataset 6	100	2022-12-05T21:30:55	  
5	My Dataset 5	100	2022-12-05T21:30:24	  

CREATE A RECORD

Experiments

ID	Name	Update Time	Control
5	My Experiment 5	2022-12-05T21:31:15	  

CREATE A RECORD

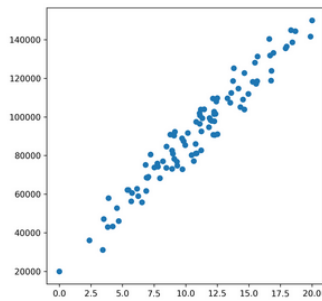
Submitted by [Jiajun Wu](#) 2022.

Step 1. Select a dataset

Dataset

6. My Dataset 6(100 rows) ▾

Step 2. Visualize the dataset



Step 3. Fit a linear model

FIT

Step 4. Visualize the result

Please finish the previous step.

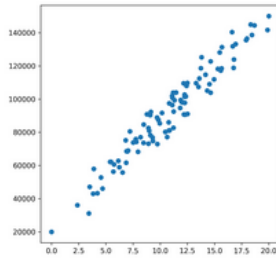
SAVE

Step 1. Select a dataset

Dataset

6. My Dataset 6(100 rows) ▾

Step 2. Visualize the dataset



Step 3. Fit a linear model

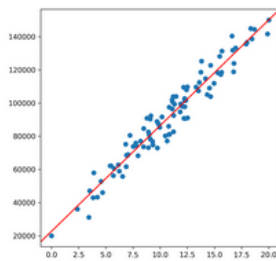
Computation started at 2022-12-05T21:33:07

Computation finished at 2022-12-05T21:33:11

Computation result: $y = 6367.64 * x + 22755.18$ ($R^2 = 0.94$)

To simulate huge datasets, I used multithreading technology and placed a "sleep(5)" in the computation function, so you see a 5-second delay .

Step 4. Visualize the result



SAVE