



cAInvas

Convert your ML models into hardwares like
RaspberryPi and MCU.



Overview

cAlnvas platform helps you realise your machine learning models and give them the extra push that they need to be deployable on EDGE devices, including your mobile and other microcontrollers.



Register | Log In

Three ways you can register:

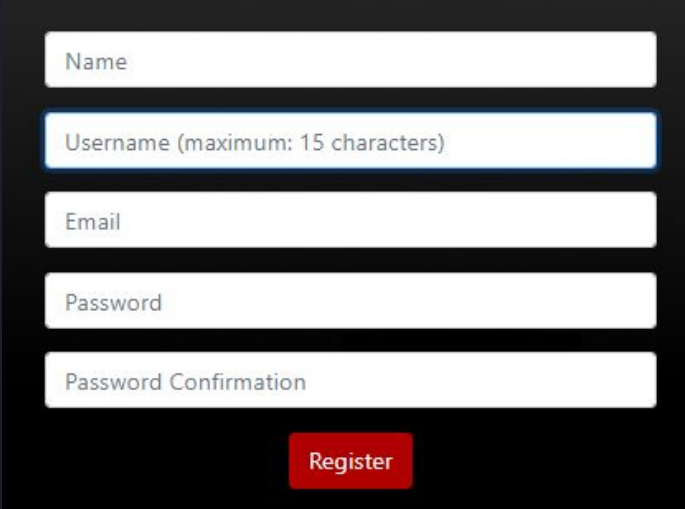
- Through Cainvas
- LinkedIn
- GitHub



Cainvas Login

Flow:

- Fill in your details
- Email confirmation sent
- Click on activation link
- Dashboard



Registration form fields:

- Name
- Username (maximum: 15 characters)
- Email
- Password
- Password Confirmation

[Register](#)



GitHub/LinkedIn Login

Flow:

- Click on the icon
- If not logged in
 - ◆ Redirect to the selected site
 - ◆ Login
- Dashboard

or you can sign in with





Profile

Details

Name	Arnab Chakraborty
Username	arnab97
Email	arnab033chakraborty@gmail.com
Joined On	Aug. 3, 2020, 6:05 p.m.

[Edit](#)[Set/Update Password](#)[Delete Account](#)

Check your details.

You can Edit your details and also set/update your password.



Update Profile

Edit:

- Modify name or email
- Verify by clicking on link sent to email
- Success

Set/ Update Password:

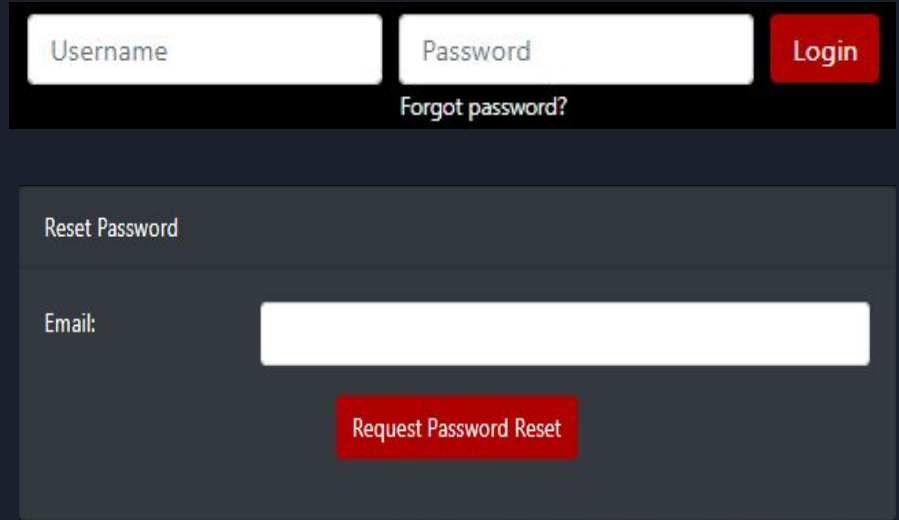
- Type in your new password
- Confirm your new password
- Success



Forgot Password

Flow:

- Click on Forgot Password
- Enter your email
- Click on Password reset link sent to your email
- Enter new password
- Login using new password



The image shows a user interface for logging in and resetting a password. At the top, there is a dark blue header with a hamburger menu icon on the left. Below the header, there is a white login form with two input fields: 'Username' and 'Password'. To the right of the 'Password' field is a red 'Login' button. Below the login form, there is a link that says 'Forgot password?'. Below this link, there is a dark blue section titled 'Reset Password'. Inside this section, there is a label 'Email:' followed by a white input field. Below the input field is a red button that says 'Request Password Reset'.

Username Password Login

Forgot password?

Reset Password

Email:

Request Password Reset

Use Cases



Explore the many number of use cases developed and contributed by the community.

You may tweak them with due credits to suit your needs and enhance the performance of your daily used gadgets.

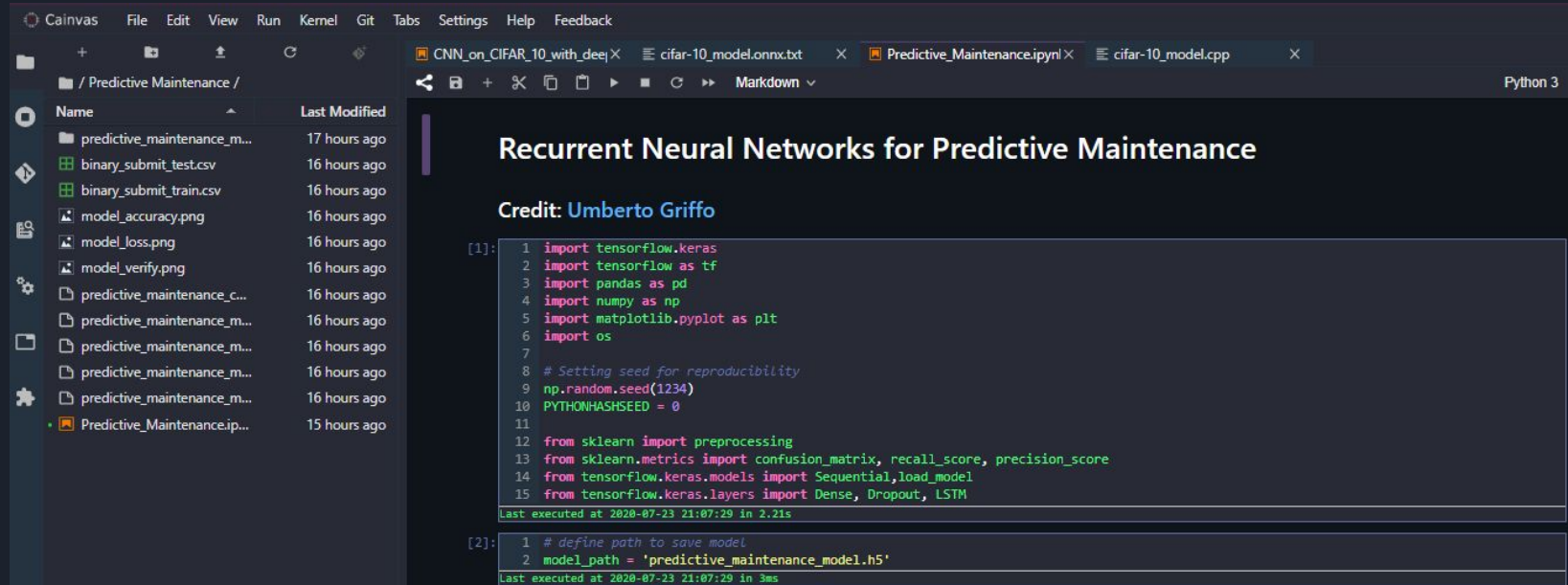


Uploads

Upload	Size	Copy	Actions
CNN_on_CIFAR_10_with_deepC.ipynb	916.7 KB	Copy URL	Delete
MNIST-Keras-DeepC.png	35.4 KB	Copy URL	Delete
MNIST-PyTorch-DeepC.png	24.3 KB	Copy URL	Delete
CIFAR.png	470.8 KB	Copy URL	Delete

- Total of 100 MB allotted to you for your datasets and other files.
- Upload your files and use the dynamic URLs to import datasets in your notebook or share them with your friends who can use them directly, without any downloading.

cAlnvas Notebook Server



The screenshot displays the cAlnvas Notebook Server interface. On the left is a file explorer for the '/ Predictive Maintenance /' directory. It lists files such as 'predictive_maintenance_m...', 'binary_submit_test.csv', 'binary_submit_train.csv', 'model_accuracy.png', 'model_loss.png', 'model_verify.png', and several 'predictive_maintenance_m...' files, all modified 16 hours ago, except for 'Predictive_Maintenance.ip...' which was modified 15 hours ago. On the right is a Jupyter notebook titled 'Recurrent Neural Networks for Predictive Maintenance' with credit to 'Umberto Grippo'. The notebook contains two code cells. Cell [1] imports tensorflow.keras, tensorflow as tf, pandas as pd, numpy as np, matplotlib.pyplot as plt, and os. It also sets a seed for reproducibility using np.random.seed(1234) and PYTHONHASHSEED = 0, and imports preprocessing, confusion_matrix, recall_score, precision_score, Sequential, load_model, Dense, Dropout, and LSTM from tensorflow.keras.layers. Cell [2] defines a path to save the model as 'predictive_maintenance_model.h5'. Both cells show execution times of approximately 2.21s and 3ms respectively, dated 2020-07-23 21:07:29.

File Explorer: / Predictive Maintenance /

Name	Last Modified
predictive_maintenance_m...	17 hours ago
binary_submit_test.csv	16 hours ago
binary_submit_train.csv	16 hours ago
model_accuracy.png	16 hours ago
model_loss.png	16 hours ago
model_verify.png	16 hours ago
predictive_maintenance_c...	16 hours ago
predictive_maintenance_m...	16 hours ago
predictive_maintenance_m...	16 hours ago
predictive_maintenance_m...	16 hours ago
predictive_maintenance_m...	16 hours ago
Predictive_Maintenance.ip...	15 hours ago

Recurrent Neural Networks for Predictive Maintenance

Credit: [Umberto Grippo](#)

```
[1]: 1 import tensorflow.keras
2 import tensorflow as tf
3 import pandas as pd
4 import numpy as np
5 import matplotlib.pyplot as plt
6 import os
7
8 # Setting seed for reproducibility
9 np.random.seed(1234)
10 PYTHONHASHSEED = 0
11
12 from sklearn import preprocessing
13 from sklearn.metrics import confusion_matrix, recall_score, precision_score
14 from tensorflow.keras.models import Sequential, load_model
15 from tensorflow.keras.layers import Dense, Dropout, LSTM

Last executed at 2020-07-23 21:07:29 in 2.21s
```

```
[2]: 1 # define path to save model
2 model_path = 'predictive_maintenance_model.h5'

Last executed at 2020-07-23 21:07:29 in 3ms
```

The Notebook Server lets you develop your models from scratch and work on them while providing you with more than enough resources to get rid of that huge compile time.

Usage of the Upload URLs

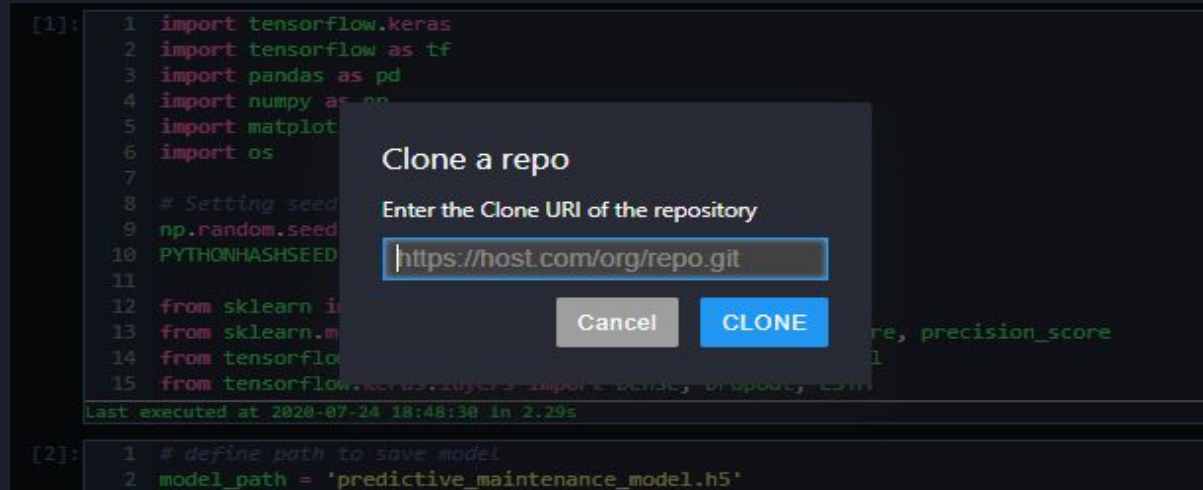
```
[3]: 1 #####
2 # Data Ingestion
3 #####
4
5 # read training data - It is the aircraft engine operating data with failure data
6 train_df = pd.read_csv('https://cainvas-static.s3.amazonaws.com/media/user_data/dark/PM_train.txt', sep=" ", header=None)
7 train_df.drop(train_df.columns[[26, 27]], axis=1, inplace=True)
8 train_df.columns = ['id', 'cycle', 'setting1', 'setting2', 'setting3', 's1', 's2', 's3',
9                    's4', 's5', 's6', 's7', 's8', 's9', 's10', 's11', 's12', 's13', 's14',
10                   's15', 's16', 's17', 's18', 's19', 's20', 's21']
11
12 train_df = train_df.sort_values(['id', 'cycle'])

Last executed at 2020-07-24 18:48:30 in 198ms

[4]: 1 # read test data - It is the aircraft engine operating data without failure events recorded.
2 test_df = pd.read_csv('https://cainvas-static.s3.amazonaws.com/media/user_data/dark/PM_test.txt', sep=" ", header=None)
```

The uploaded files could be anything from datasets (.csv, .txt, .tsv) to images that you might need for your notebooks.

Import from GitHub



The image shows a Jupyter Notebook interface with a code cell and a modal dialog. The code cell contains the following Python code:

```
[1]: 1 import tensorflow.keras
      2 import tensorflow as tf
      3 import pandas as pd
      4 import numpy as np
      5 import matplotlib.pyplot as plt
      6 import os
      7
      8 # Setting seed
      9 np.random.seed(123)
     10 PYTHONHASHSEED=123
     11
     12 from sklearn.metrics import accuracy_score, precision_score
     13 from sklearn.metrics import recall_score, f1_score
     14 from tensorflow.keras.layers import Dense, Dropout, LSTM
     15 from tensorflow.keras.models import Sequential
```

A modal dialog titled "Clone a repo" is displayed over the code cell. It contains the text "Enter the Clone URI of the repository" and a text input field with the value "https://host.com/org/repo.git". There are two buttons: "Cancel" and "CLONE".

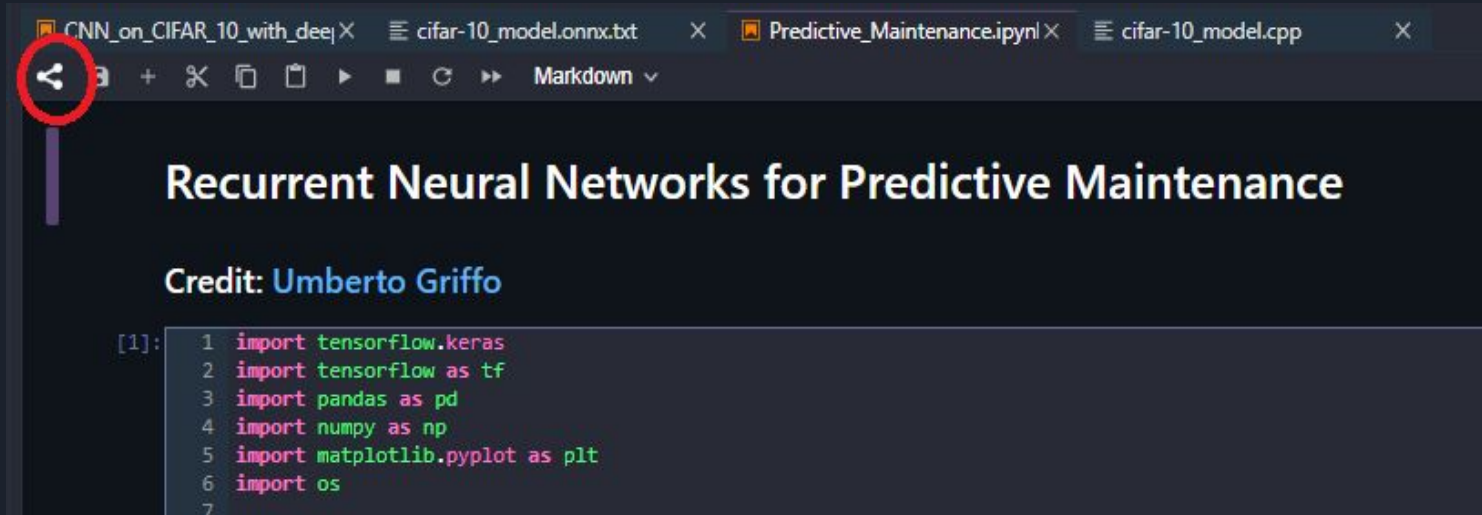
Below the code cell, the output shows the last execution time: "Last executed at 2020-07-24 18:48:30 in 2.29s".

The next code cell is partially visible:

```
[2]: 1 # define path to save model
      2 model_path = 'predictive_maintenance_model.h5'
```

Clone repositories from GitHub and modify them according to your needs.

Share Your Notebooks



Share your notebooks among your peers or on different platforms to flaunt your hard work.



Special Award

Award/ Prize: \$10 AWS gift-card for your Notebook shared on Social Media for cainvas.

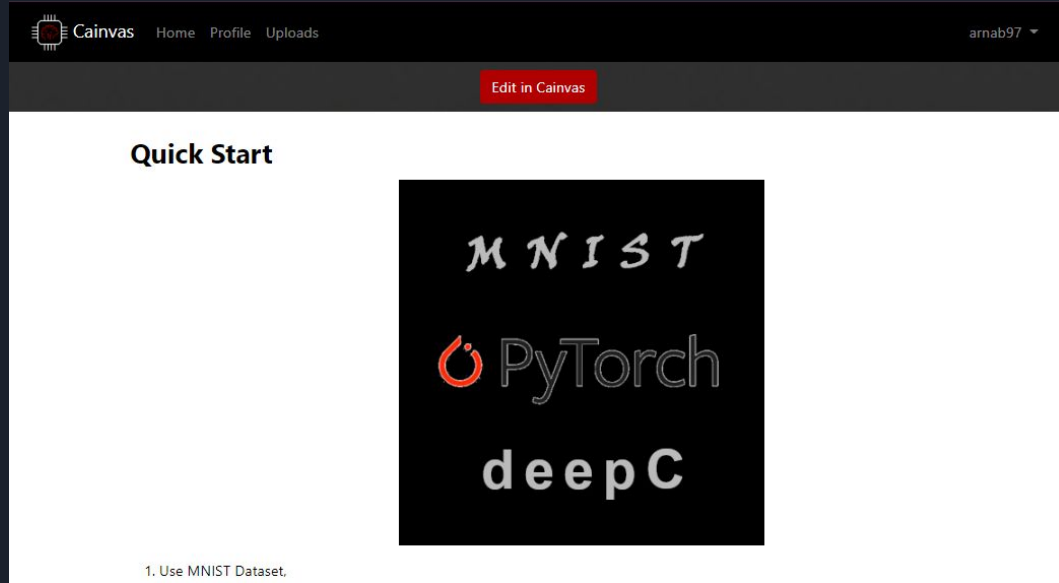
Make your posts public and share it on LinkedIn with #cAInvas

NOTE: The posts will be evaluated based on the quality and innovativeness of the notebook as well as the number of reactions. Results will be announced on next Thursday (13/08/2020).

Edit in cAInvas

Flow:

- Click on Edit in Cainvas
- Notebook copied to your workspace
- Open Notebook Server
- Tweak/ Edit to your heart's content

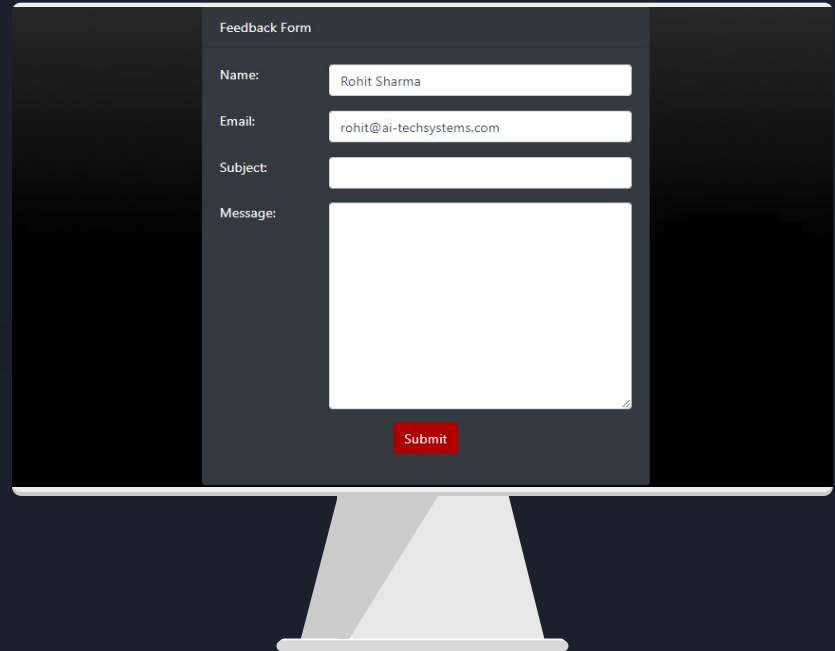




Thank you!

Do provide us with your feedback so that we can help you better in the process.

<https://cainvas.ai-tech.systems/>



Feedback Form

Name:

Email:

Subject:

Message: