Quick Demo using Deep Learning Studio

Deep Learning Studio Cloud is a single-user solution for creating and deploying AI developed by Deep Cognition, Inc. The simple drag & drop interface helps you design deep learning models with ease. Pre-trained models as well as use built-in assistive features simplify and accelerate the model development process. You can import model code and edit the model with the visual interface. The platform automatically saves each model version as you iterate and tune hyper-parameters to improve performance. You can compare performance across versions to find your optimal design. AutoML feature can let you design your first neural network without prior knowledge of deep learning.

Special thanks to "**Favio Vázquez**"; Data Scientist at BBVA Data & Analytics and " **Mahesh Kashyap**"; Chief Digital Officer at Deep Cognition, Inc for the amazing webinar that covered introduction to Deep Learning, beside that they introduced the amazing Deep Learning Studio. Summary of the webinar can be reached through this link.

Without any prior knowledge of deep learning, you can really design your first neural network following the below steps. Here we took one of the available public datasets that can be a sign for good or bad hotels by simply checking the rooms' toilets! Maybe it looks weird, but it is exciting to analyze anything.

Steps of creating and training a model are described as follows:

1) Create a free cloud account on **http://deepcognition.ai**

2) Go to "**Projects**" on the left toolbar and create a new project. Then open the project tab to choose a dataset and select the "train/validation/test" percentage. And below in the data section, you can find sample of the chosen dataset.

3) A model can simply be created by drag-n-drop to tackle specific problem. If you have no prior experience, simply use the AutoML wizard feature, then your model will be created at the glance.
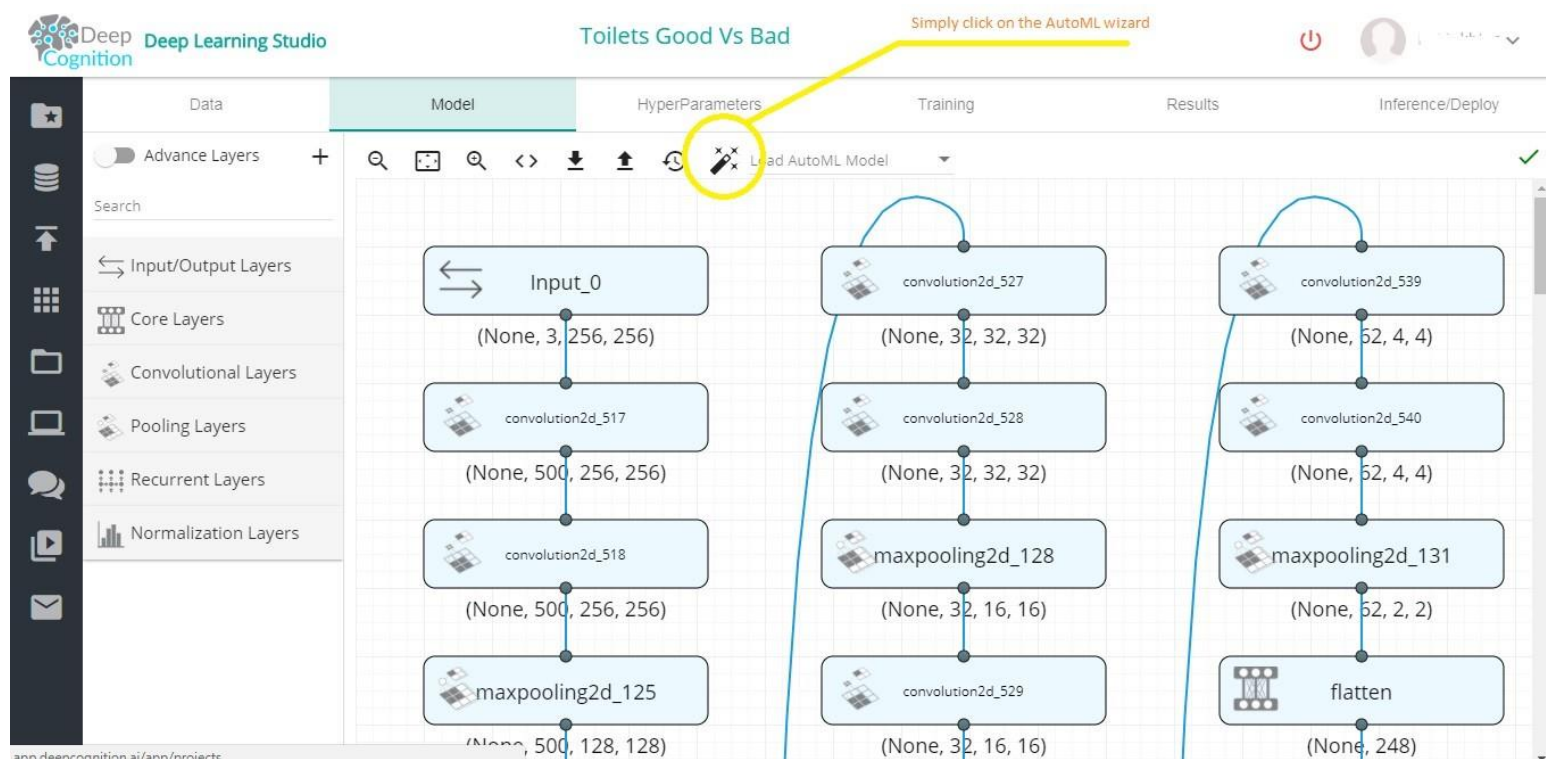

4) After that, you must start training of data. But firstly, you must start your instance by clicking on the upper right power button. You can use any type of instances for the **first two hours free of charge.**

Note: Compute instances are billed in one-second increments while instance is running.
First 2 hours of compute instance is free for all new accounts.

Note: You must add the billing information under your account information to be able to start the instance.
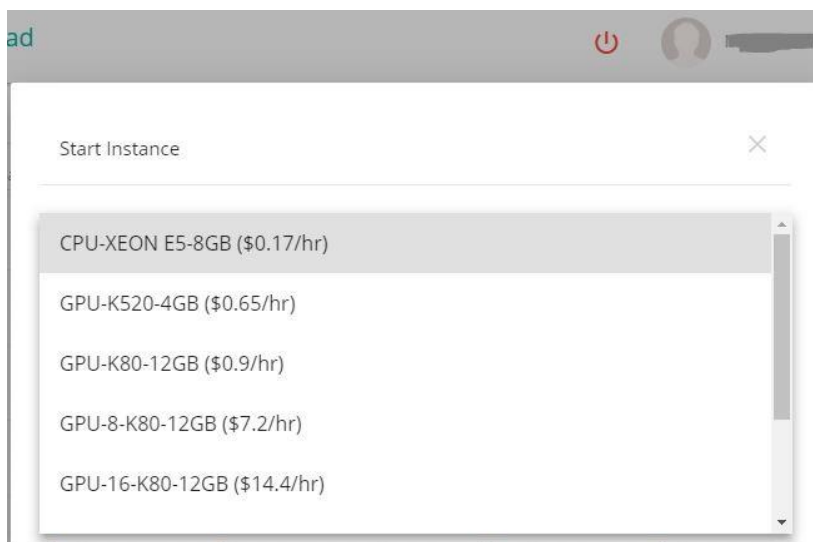
5) Go to the training tab and choose the number of GPUs that will be used in training, then click on "Start Training". It will proceed on training your model showing some useful insights.
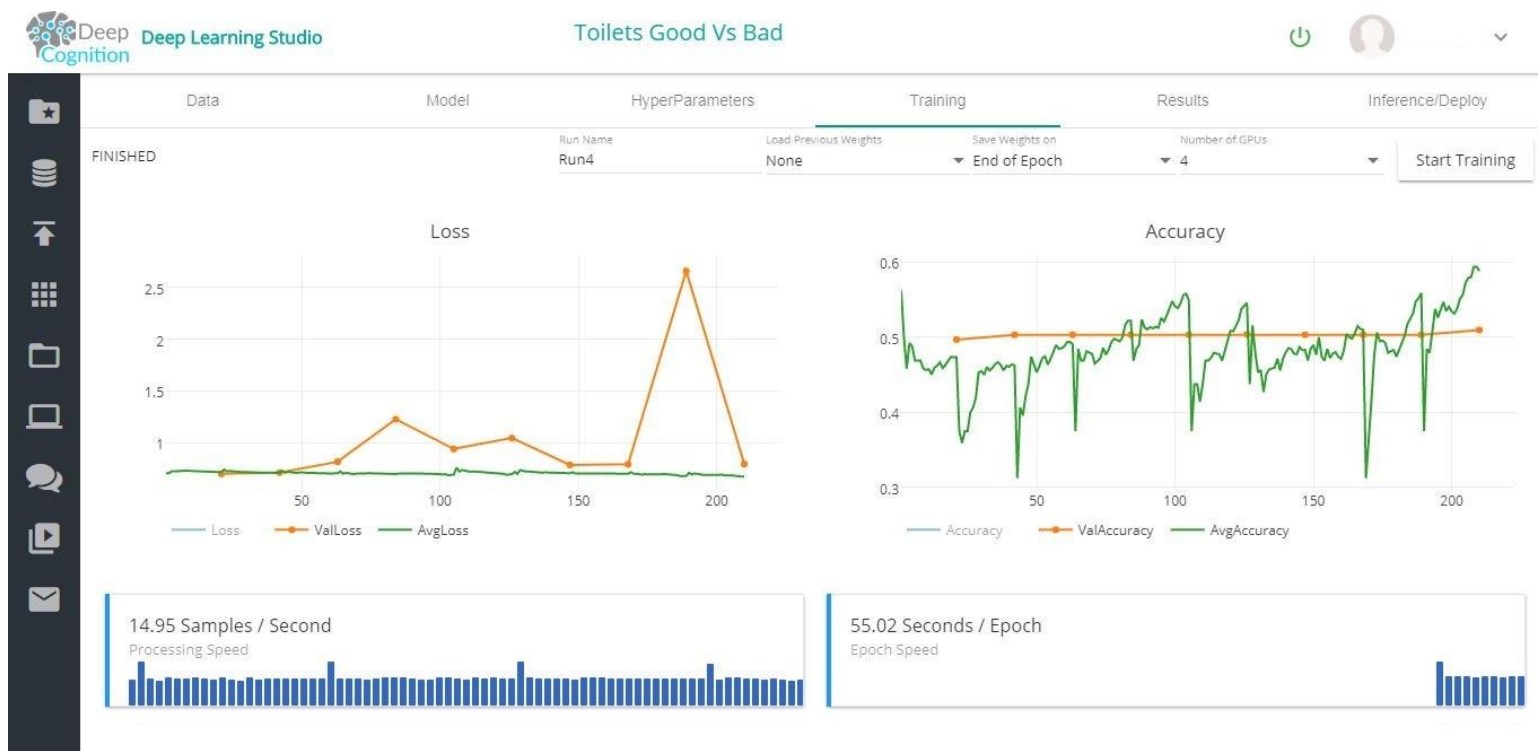
6) Sample of results graphs are shown as below

7) Inferences can be made; using the current dataset or using any other local data as shown below

8) The trained model files can be downloaded as well, which is so interesting.

mapping.pkl	2,941	2,941	PKL File
test.py	12,430	12,430	Canopy Document
model.h5	19,830,280	19,830,280	H5 File
config.yaml	10,049	10,049	YAML File

9) The created model can be deployed as a web app, which is so interesting too. It can be used to test any local dataset. Good predication was obtained while testing samples locally.

```
curl -X POST "http://34.235.171.234/models/Toilets_Check/v1/predict" -H "Content-Ty
pe:multipart/form-data" -F "data={\"key\": \"Image\"};type=application/json" -F "Im
age=@/path/to/image.png"
```

WEBAPP   API

10) Finally, deep learning model was created in less than one hour.

Simple Neural Network   Deep Learning Neural Network

● Input Layer   ● Hidden Layer   ● Output Layer