

Note to run cells

- Open a .ipynb file with Colab.
- A cell can be run by shift+enter.
- If the kernel has been restarted, you have to re-install packages by e.g. :
`install.packages('keras')`
You could do this when you encounter an error concerning the command `library()`.

machine-learning practitioner, you'll see MNIST come up over and over again, in scientific papers, blog posts, and so on.

The MNIST dataset comes preloaded in Keras, in the form of `train` and `test` lists, each of which includes a set of images (`x`) and associated labels (`y`):

```
install.packages('keras')
```

```
... Installing package into '/usr/local/lib/R/site-library'  
(as 'lib' is unspecified)  
also installing the dependencies 'config', 'reticulate', 'tensorflow', 'tfruns'
```

Note

- A command to fit a model to data by e.g.:

```
[15] history <- model %>% fit(  
  partial_x_train,  
  partial_y_train,  
  epochs = 20,  
  batch_size = 512,  
  validation_data = list(x_val, y_val)  
)
```

may take time. With unknown reasons, epoch-by-epoch outputs (a kind of traces) are not displayed.