Experimenting with TPUs Disseminating AI research Creating tutorials

To see sample Colab notebooks that demonstrate machine learning applications, see the machine learning examples below.

 More Resources

# Working with Notebooks in Colab

[Overview of Colab](https://colab.research.google.com/notebooks/basic_features_overview.ipynb) [Guide to Markdown](https://colab.research.google.com/notebooks/markdown_guide.ipynb)

[Importing libraries and installing dependencies](https://colab.research.google.com/notebooks/snippets/importing_libraries.ipynb) [Saving and loading notebooks in GitHub](https://colab.research.google.com/github/googlecolab/colabtools/blob/main/notebooks/colab-github-demo.ipynb) [Interactive forms](https://colab.research.google.com/notebooks/forms.ipynb)

[Interactive widgets](https://colab.research.google.com/notebooks/widgets.ipynb)

# Working with Data

[Loading data: Drive, Sheets, and Google Cloud Storage](https://colab.research.google.com/notebooks/io.ipynb) [Charts: visualizing data](https://colab.research.google.com/notebooks/charts.ipynb)

[Getting started with BigQuery](https://colab.research.google.com/notebooks/bigquery.ipynb)

# Machine Learning

These are a few of the notebooks related to Machine Learning, including Google's online Machine Learning course. See the [full course](https://developers.google.com/machine-learning/crash-course/) [website](https://developers.google.com/machine-learning/crash-course/) for more.

[Intro to Pandas DataFrame](https://colab.research.google.com/github/google/eng-edu/blob/main/ml/cc/exercises/pandas_dataframe_ultraquick_tutorial.ipynb)

 [Intro to RAPIDS cuDF to accelerate pandas](https://www.google.com/url?q=https%3A%2F%2Fnvda.ws%2Frapids-cudf) [Getting Started with cuML's accelerator mode](https://colab.research.google.com/github/rapidsai-community/showcase/blob/main/getting_started_tutorials/cuml_sklearn_colab_demo.ipynb) [Linear regression with tf.keras using synthetic data](https://colab.research.google.com/github/google/eng-edu/blob/main/ml/cc/exercises/linear_regression_with_synthetic_data.ipynb)

# Using Accelerated Hardware

[TensorFlow with GPUs](https://colab.research.google.com/notebooks/gpu.ipynb) [TPUs in Colab](https://colab.research.google.com/notebooks/tpu.ipynb)

#  Featured examples

[Retraining an Image Classifier](https://tensorflow.org/hub/tutorials/tf2_image_retraining): Build a Keras model on top of a pre-trained image classifier to distinguish flowers. [Text Classification](https://tensorflow.org/hub/tutorials/tf2_text_classification): Classify IMDB movie reviews as either *positive* or *negative*.

[Style Transfer](https://tensorflow.org/hub/tutorials/tf2_arbitrary_image_stylization): Use deep learning to transfer style between images.

[Multilingual Universal Sentence Encoder Q&A](https://tensorflow.org/hub/tutorials/retrieval_with_tf_hub_universal_encoder_qa): Use a machine learning model to answer questions from the SQuAD dataset. [Video Interpolation](https://tensorflow.org/hub/tutorials/tweening_conv3d): Predict what happened in a video between the first and the last frame.

list1 = [] # Empty List print(type(list1))

 <class 'list'>

list2 = [10,30,60] # List of integers numbers

list3 = [10.77,30.66,60.89] # List of float numbers

list1

 []

list2

 [10, 30, 60]

list3

[10.77, 30.66, 60.89]

list4=['one','two','three'] list4

 ['one', 'two', 'three']

list5=['Asif',50,[25,100],[150,90]]

list5

['Asif', 50, [25, 100], [150, 90]]

ist6=[100,'Asif',17.765]

list6

 [100, 'Asif', 17.765]

len(list6)  3

list6[0]

 100

list4[0][0]

 *'o'*

list6[-1]

 17.765

list6[-4]



IndexError Traceback (most recent call last)

<ipython-input-36-4aa9c3baf7fc> in <cell line: 0>()

----> 1 list6[-4]

IndexError: list index out of range

Next steps:

Explain error

#List slicing

mylist=['one','two','three','four']

mylist[0:3]

 ['one', 'two', 'three']

mylist[2:4]

 ['three', 'four']

mylist[:-1]

 ['one', 'two', 'three']

mylist[3:]

 ['four']

mylist[-2:] #last two elements  ['three', 'four']

mylist[:]# returns all elements

['one', 'two', 'three', 'four']