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        "Colaboratory, or \"Colab\" for short, allows you to write and execute Python in your browser, with \n",
        "- Zero configuration required\n",
        "- Free access to GPUs\n",
        "- Easy sharing\n",
        "\n",
        "Whether you're a **student**, a **data scientist** or an **AI researcher**, Colab can make your work easier. Watch [Introduction to Colab](https://www.youtube.com/watch?v=inN8seMm7UI) to learn more, or just get started below!"
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        "data = mnist.load_data() \n",
        "((X_train, y_train), (X_test, y_test)) = data \n",
        "X_train = X_train.reshape((X_train.shape [0], 28*28)).astype('float32') \n",
        "X_test = X_test.reshape((X_test.shape [0], 28*28)).astype('float32')\n",
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"X_test = X_test / 255 \n",
"from keras.utils import np_utils \n",
"print(y_test.shape) \n",
"y_train = np_utils.to_categorical(y_train) \n",
"y_test = np_utils.to_categorical(y_test)\n",
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"from keras.models import Sequential \n",
"from keras.layers import Dense \n",
"model = Sequential() \n",
"model.add(Dense(32, input_dim = 28*28, activation='relu')) \n",
"model.add(Dense(64, activation='relu')) \n",
"model.add(Dense(10, activation='softmax'))\n",
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"model.compile(loss='categorical_crossentropy', optimizer='adam', metrics=['accuracy'])
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"model.summary()\n",
"model.fit(X_train, y_train, epochs=10, batch_size=100)\n",
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    "\n",
    "Colab notebooks are Jupyter notebooks that are hosted by Colab. To learn more about the Jupyter project, see [jupyter.org](https://www.jupyter.org).\"
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    "- Developing and training neural networks\n",
    "- Experimenting with TPUs\n",
    "- Disseminating AI research\n",
    "- Creating tutorials\n",
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    "- [Overview of Colaboratory](/notebooks/basic_features_overview.ipynb)\n",
    "- [Guide to Markdown](/notebooks/markdown_guide.ipynb)\n",
    "- [Importing libraries and installing dependencies](/notebooks/snippets/importing_libraries.ipynb)\n",
    "- [Saving and loading notebooks in
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GitHub](https://colab.research.google.com/github/googlecolab/colabtools/blob/master/notebooks/colab-github-demo.ipynb)\n",
    "- [Interactive forms](/notebooks/forms.ipynb)\n",
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    "- [Loading data: Drive, Sheets, and Google Cloud Storage](/notebooks/io.ipynb) \n",
    "- [Charts: visualizing data](/notebooks/charts.ipynb)\n",
    "- [Getting started with BigQuery](/notebooks/bigquery.ipynb)\n",
    "\n",
    "### Machine Learning Crash Course\n",
    "These are a few of the notebooks from Google's online Machine Learning course. See
the [full course website](https://developers.google.com/machine-learning/crash-course/) for
more.\n",
    "- [Intro to Pandas](/notebooks/mlcc/intro_to_pandas.ipynb)\n",
    "- [Tensorflow
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    "- [First steps with TensorFlow](/notebooks/mlcc/first_steps_with_tensor_flow.ipynb)\n",
    "- [Intro to neural nets](/notebooks/mlcc/intro_to_neural_nets.ipynb)\n",
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Colaboratory makes possible, check out these tutorials using models from [TensorFlow
Hub](https://tfhub.dev).\n",
    "\n",
    "A few featured examples:\n",
    "\n",
    "- [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.\n",
    "- [Text Classification](https://tensorflow.org/hub/tutorials/tf2_text_classification):
Classify IMDB movie reviews as either *positive* or *negative*.\n",
    "- [Style Transfer](https://tensorflow.org/hub/tutorials/tf2_arbitrary_image_stylization):
Use deep learning to transfer style between images.\n",

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    "- [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.\n",
    "- [Video Interpolation](https://tensorflow.org/hub/tutorials/tweening_conv3d): Predict
what happened in a video between the first and the last frame.\n"
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