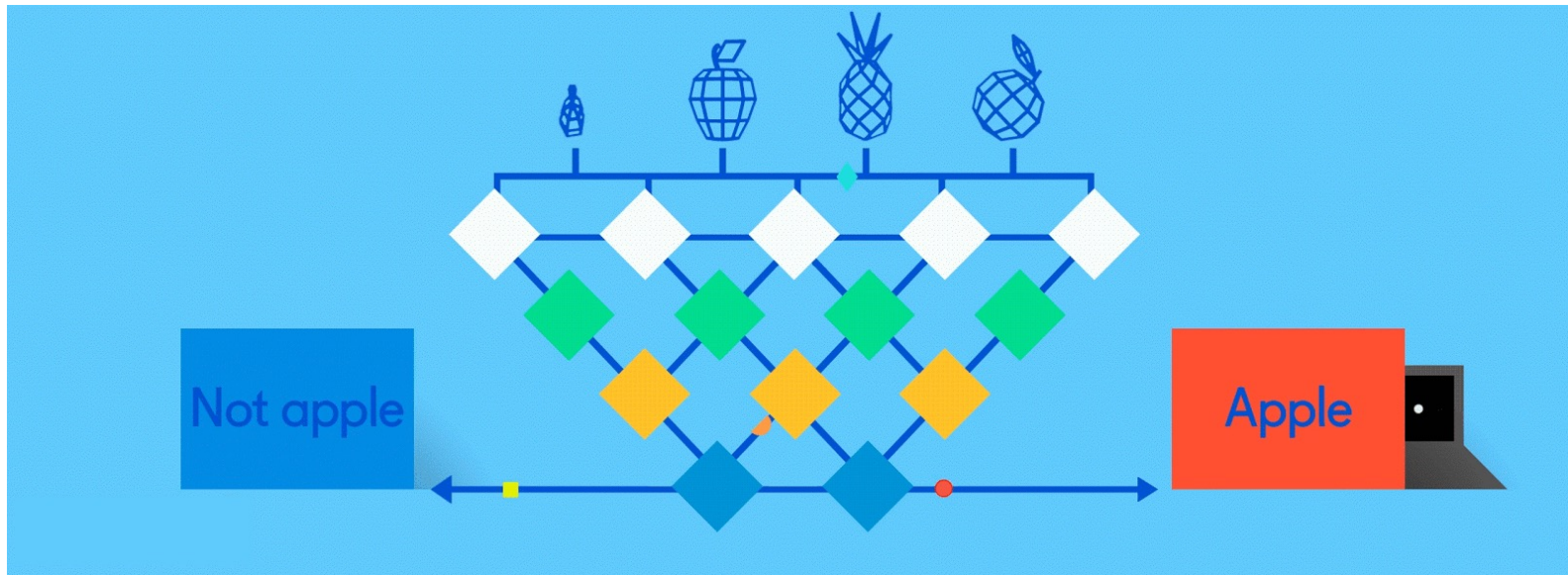


Neural Networks for Machine Learning demonstrations



Neural Network Architectures

Current focus on large networks with different “architectures” suited for different kinds of tasks

- Feedforward Neural Network (aka MLP)
- CNN: Convolutional Neural Network
- RNN: Recurrent Neural Network
- LSTM: Long Short Term Memory
- Transformer

Neural Network Colab Notebooks

The screenshot shows a Google Drive interface with the following elements:

- Browser:** Chrome browser with the address bar showing `drive.google.com`.
- Search:** A search bar with the text "Search in Drive".
- Navigation:** Breadcrumbs showing "My Drive > AI Colab Notebooks > 09 Neural networks".
- Left Sidebar:**
 - "New" button with a plus sign.
 - "My Drive" folder icon.
 - "Shared with me" section with a person icon.
 - "Recent" section with a clock icon.
 - "Starred" section with a star icon.
 - "Trash" section with a trash can icon.
 - "Storage" section showing a progress bar for "12.8 GB of 19 GB used" and a "Buy storage" button.
- Main Content Area:** A grid of Colab notebook thumbnails, each with a yellow "CO" logo.
 - 00_MLP.ipynb:** Preview shows text: "The multi-layer perceptron is the simplest neural network architecture and the only one that scikit learn supports" and code:

```
from sklearn.neural_network import MLPClassifier
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.datasets import load_iris
import sklearn.metrics
```
 - 01_MNIST.ipynb:** Preview shows the "CO" logo.
 - 02_CNN_MNIST.ipynb:** Preview shows the title "Classifying digits with convolutional neural networks" and text: "This notebook contains the solution to the MNIST activity." and "Load the data" section: "Both Keras and TF-Learn contain the".
 - 03_CNN_fashion.ipynb:** Preview shows the "CO" logo.
 - 04_text_classification.ipynb:** Preview shows the "CO" logo.
 - 05_RNN_text_classification.ipynb:** Preview shows the "CO" logo.
 - 06_transformer_gpt2.ipynb:** Preview shows a blue document icon.