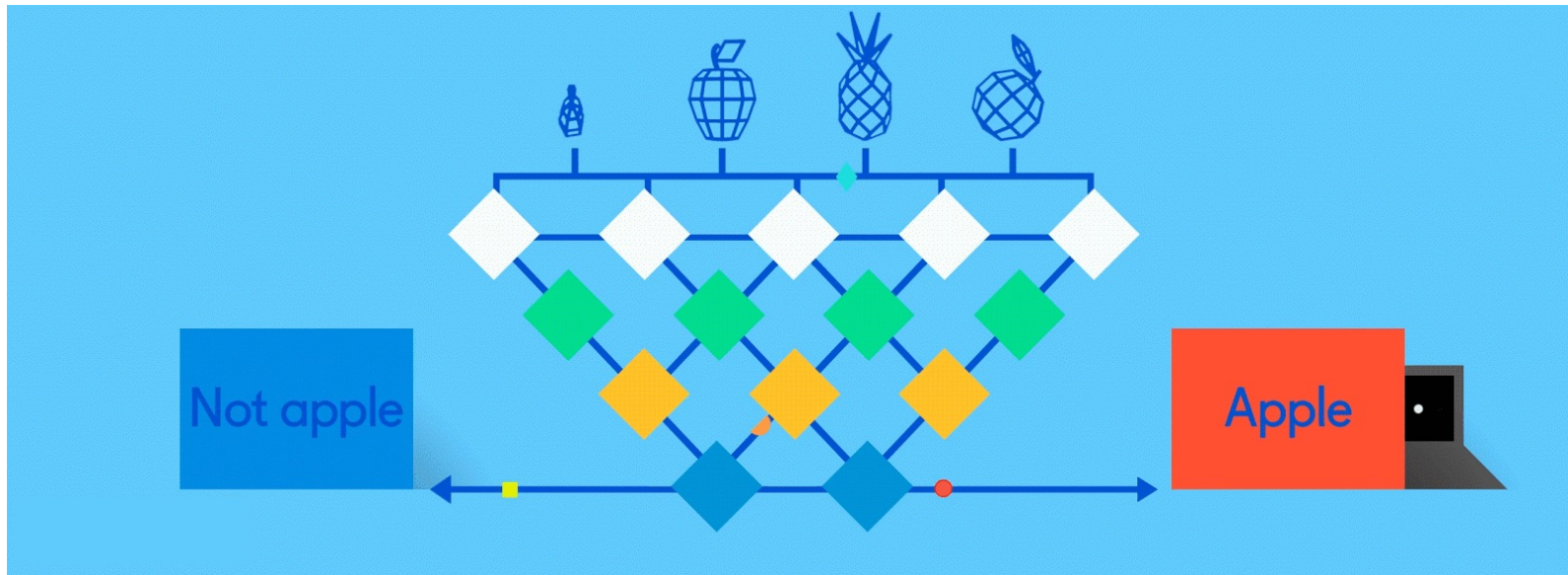


# Neural Networks for Machine Learning demonstrations



# 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:** A breadcrumb path: "My Drive > AI Colab Notebooks > 09 Neural networks".
- Left Sidebar:**
  - "New" button with a plus sign.
  - "My Drive" folder icon.
  - "Shared with me" folder icon.
  - "Recent" folder icon.
  - "Starred" folder icon.
  - "Trash" folder 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:
  - 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`.
  - 01\_MNIST.ipynb:** Preview shows the Colab logo.
  - 02\_CNN\_MNIST.ipynb:** Preview shows the title "Classifying digits with convolutional neural networks" and the section "Load the data".
  - 03\_CNN\_fashion.ipynb:** Preview shows the Colab logo.
  - 04\_text\_classification.ipynb:** Preview shows the Colab logo.
  - 05\_RNN\_text\_classification.ipynb:** Preview shows the Colab logo.
  - 06\_transformer\_gpt2.ipynb:** Preview shows a document icon.