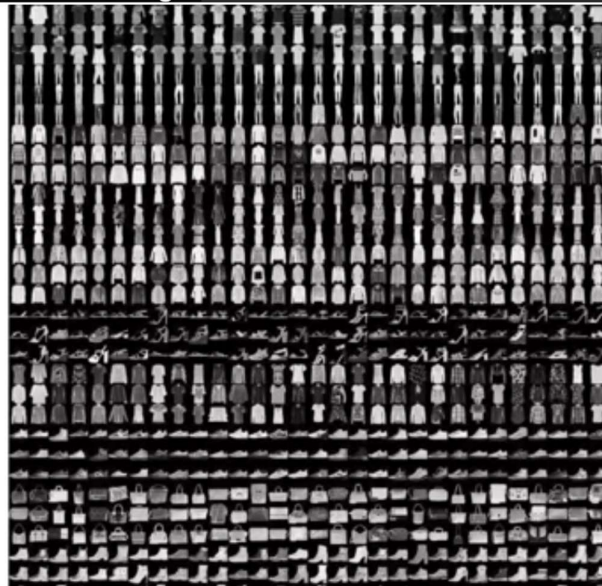




understand and label what
is present in an image.

Fashion MNIST

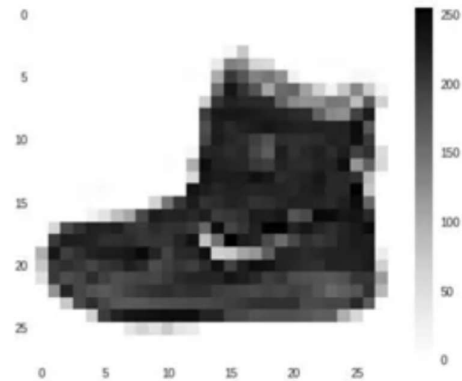
- 70k Images
- 10 Categories
- Images are 28x28
- Can train a neural net!



called Fashion MNIST which gives

Fashion MNIST

- 70k Images
- 10 Categories
- Images are 28x28
- Can train a neural net!

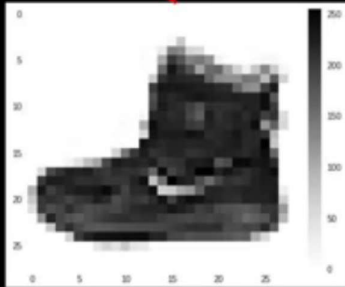


so the amount of information
is also reduced.

```
fashion_mnist = keras.datasets.fashion_mnist  
(train_images, train_labels), (test_images, test_labels) = fashion_mnist.load_data()
```

type MNIST loading it
from the Keras database.

```
fashion_mnist = keras.datasets.fashion_mnist  
(train_images, train_labels), (test_images, test_labels) = fashion_mnist.load_data()
```

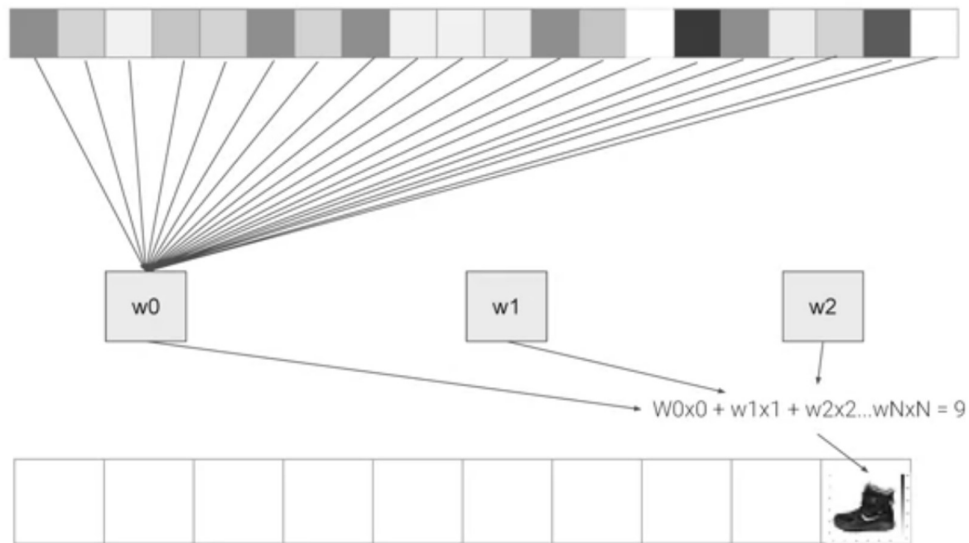


09

While this image
is an ankle boot,

```
model = keras.Sequential([  
    keras.layers.Flatten(input_shape=(28, 28)),  
    keras.layers.Dense(128, activation=tf.nn.relu),  
    keras.layers.Dense(10, activation=tf.nn.softmax)  
])
```

The important things
to look at are



By figuring out the values of w ,

```
mnist = tf.keras.datasets.fashion_mnist
(training_images, training_labels), (test_images, test_labels) = mnist.load_data()
training_images=training_images/255.0
test_images=test_images/255.0
model = tf.keras.models.Sequential([
    tf.keras.layers.Flatten(),
    tf.keras.layers.Dense(512, activation=tf.nn.relu),
    tf.keras.layers.Dense(10, activation=tf.nn.softmax)
])
model.compile(optimizer='adam', loss='sparse_categorical_crossentropy')
model.fit(training_images, training_labels, epochs=5)
```

Okay, so here's
our code for training

```
class myCallback(tf.keras.callbacks.Callback):  
    def on_epoch_end(self, epoch, logs={}):  
        if(logs.get('loss')<0.4):  
            print("\nLoss is low so cancelling training!")  
            self.model.stop_training = True
```

0.4 and canceling
the training itself.

```
class myCallback(tf.keras.callbacks.Callback):  
    def on_epoch_end(self, epoch, logs={}):  
        if(logs.get('loss')<0.4):  
            print("\nLoss is low so cancelling training!")  
            self.model.stop_training = True
```

For example, the current loss
is available in the logs,

```
callbacks = myCallback()
mnist = tf.keras.datasets.fashion_mnist
(training_images, training_labels), (test_images, test_labels) = mnist.load_data()
training_images=training_images/255.0
test_images=test_images/255.0
model = tf.keras.models.Sequential([
    tf.keras.layers.Flatten(),
    tf.keras.layers.Dense(512, activation=tf.nn.relu),
    tf.keras.layers.Dense(10, activation=tf.nn.softmax)
])
model.compile(optimizer='adam', loss='sparse_categorical_crossentropy')
model.fit(training_images, training_labels, epochs=5, callbacks=[callbacks])
```

Then, in my model.fit,