Keras - Cheat Sheet

Adding layers to Model

```
>>> from keras.models import Sequential
>>> from keras.layers import Dense
>>> model = Sequential()
# Input layer with input = 784 , output =
400
>>> model.add(Dense(400,input_dim=784))
```

Adding activation to layers/model

```
>>> from keras.layers import Activation

# Make sure a layer has been added right
before this statement
>>> model.add(Activation('relu'))
```

Compiling a model with Optimizer and Loss function

```
>>> model.compile(optimizer='rmsprop',
loss='categorical_entropy')
```

Creating SGD optimizer

```
>>> from keras.optimizers import SGD
>>> sgd = SGD(lr=0.1, decay=1e-6,
momentum=0.9, nesterov=True)

OR

# Uses default parameters

>>> model.compile(optimizer='sgd',
loss='categorical_entropy')
```

Training the model with data for N epochs and M batch size

```
>>> model.fit(training_data,labels,
nb_epochs=100, batch_size=5)
```

Predicting class probabilities

```
>>> model.predict_proba(training_data)
```

Activations
softmax
softsign
relu
tanh
sigmoid
hard-sigmoid
linear

Loss
mean_squared_error
squared hinge
hinge
binary_crossentropy
categorical_crossentropy
poisson
cosine_proximity

Initializations
uniform
lecun_uniform
normal
identity
orthogonal
zero
one

Optimizers
sgd
rmsprop
adagrad
adam
nadam