Keras

API escrita sobre Theano, CNTK ou Tensorflow

Keras

```
# create model
model = Sequential()
model.add(Dense(20, activation="tanh", input_dim=5, kernel_initializer="uniform"))
model.add(Dense(1, activation="linear", kernel_initializer="uniform"))

# Compile model
model.compile(loss='mse', optimizer='adam', metrics=['accuracy'])

# Fit the model
model.fit(X1, Y1, epochs=100, batch_size=10,  verbose=2)

# Calculate predictions
PredTestSet = model.predict(X1)
PredValSet = model.predict(X2)

# Save predictions
numpy.savetxt("trainresults.csv", PredTestSet, delimiter=",")
numpy.savetxt("valresults.csv", PredValSet, delimiter=",")
```

- Modelos no Keras são definidos como uma sequência de camadas

Adicionar Camadas

```
model.add(Dense(20, activation="tanh", input_dim=5, kernel_initializer="uniform"))
model.add(Dense(1, activation="linear", kernel_initializer="uniform"))
```

- Uma camada Fully Connected (usando Dense). Definimos camadas ocultas como primeiro argumento

Criar Camada Sequencial

```
# Compile model
model.compile(loss='mse', optimizer='adam', metrics=['accuracy'])

# Fit the model
model.fit(X1, Y1, epochs=100, batch_size=10,  verbose=2)
```

- conda install -c anaconda keras

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