Deep Learning Pre-Assignment

First, please download the following package in R using the commands below:

install.packages("keras")

Next we need to get the core packages that the Keras API relies upon installed on your machine. To do this, execute the commands

library(keras)  
install\_keras()

Finally, to ensure that Keras has been properly installed and that it’s ready to be used for the lesson, please execute the following commands. You should see 10 progress bars. Please email me at [zblanks@mit.edu](mailto:zblanks@mit.edu) if you do not see this.

library(keras)  
  
# Generate some toy data   
x <- runif(n = 100)  
y <- (0.1 \* x) + 0.3  
  
# Define our computational graph  
model <- keras\_model\_sequential() %>%   
 layer\_dense(units = 1, input\_shape = c(NULL, 1))  
  
# Define the model compiler  
model %>% compile(  
 loss = "mean\_squared\_error",  
 optimizer = optimizer\_sgd()  
)  
  
# Fit the model to the data  
model %>% fit(  
 x = x, y = y, epochs = 10, verbose = 1  
)