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Last login: Mon May 22 21:01:52 on ttys000
WL-24-146:~ E$ cd Desktop/MATH189/Homework
WL-24-146:Homework E$ cd hw2_starter_files
WL-24-146:hw2_starter_files E$ python3 hw2pr3.py
==> Loading data...
hw2pr3.py:382: FutureWarning: reshape is deprecated and will raise in a subseque
nt release. Please use .values.reshape(...) instead
  y_train = np.log(df[df.type == 'train'].shares).reshape((-1, 1))
hw2pr3.py:387: FutureWarning: reshape is deprecated and will raise in a subseque
nt release. Please use .values.reshape(...) instead
  y_val = np.log(df[df.type == 'val'].shares).reshape((-1, 1))
hw2pr3.py:392: FutureWarning: reshape is deprecated and will raise in a subseque
nt release. Please use .values.reshape(...) instead
  y_test = np.log(df[df.type == 'test'].shares).reshape((-1, 1))
==> Step 1: RMSE vs lambda...
==> Plotting completed.
==> The optimal regularization parameter is  10.4229.
==> The RMSE on the validation set with the optimal regularization parameter is
 0.8351.
==> The RMSE on the test set with the optimal regularization parameter is  0.862
8.

==> Step 2: Norm vs lambda...
==> Plotting completed.

==> Step 3: Linear regression without bias...
--Time elapsed for training: 118.79 seconds
==> Difference in bias is  3.7317E-10
==> Difference in weights is  4.7378E-10

==> Step 4: Gradient descent
==> Running gradient descent...
-- Iteration25 - training rmse  1.6604 - gradient norm  3.6435E+04
-- Iteration50 - training rmse  1.2519 - gradient norm  2.4237E+04
-- Iteration75 - training rmse  1.0664 - gradient norm  1.5202E+04
-- Iteration100 - training rmse  0.9896 - gradient norm  9.7337E+03
-- Iteration125 - training rmse  0.9596 - gradient norm  6.3025E+03
-- Iteration150 - training rmse  0.9481 - gradient norm  4.1295E+03
--Time elapsed for training: 77.61 seconds
==> Plotting completed.
==> Difference in bias is  1.5380E-01
(59, 1) (59, 1)
==> Difference in weights is  7.8195E-01
WL-24-146:hw2_starter_files E$
```