Welcome to Regression, the second course in the University of Washington Machine Learning Specialization on Coursera! By joining this course, you’ve taken another step in becoming a machine learning expert. Regression is one of the most important and broadly used machine learning and statistics tools out there. It allows you to make predictions from data by learning the relationship between features of your data and some observed, continuous-valued response. Regression is used in a massive number of applications ranging from predicting stock prices to understanding gene regulatory networks.  
  
To begin, we recommend taking a few minutes to explore the course site. Review the material we’ll cover each week, and preview the assignments you’ll need to complete to pass the course. These assignments---one per Module 2 through 7--- will give you hands-on experience in fundamental regression concepts, including implementing and applying regression algorithms to real-world data. In particular, the topics covered include:

* Simple linear regression
* Multiple regression
* Assessing performance
* Ridge regression
* Feature selection & Lasso
* Nearest neighbor & kernel regression

You will also become familiar with and implement fundamental techniques that are core to all of machine learning, beyond regression, such as cross validation, bias-variance tradeoff, gradient descent and coordinate descent.  
  
We provide starter code for all assignments using IPython Notebooks for an interactive experience, but you are welcome to use other tools in this course.  
  
Click **Discussions** to see forums where you can discuss the course material with fellow learners taking the class. Be sure to introduce yourself to everyone in the Meet and Greet forum.  
  
If you have questions about course content, please post them in the forums to get help from others in the course community. For technical problems with the Coursera platform, visit the [Learner Center](https://learner.coursera.help/hc/en-us).  
  
We’re excited to have you in the class and look forward to your contributions to the learning community. Good luck as you get started, and we hope you enjoy the course!  
  
--Emily Fox and Carlos Guestrin