

## Self-Study R Course (SSRC)

### Chapter 5: Regression Models

#### Instructions

	Instructions	Resource	Comments
1.	Briefly check out the exercise sheet for chapter 5 to get an impression of what you need to learn/know to solve it.		
2.	Watch the following Video.	<a href="#">Video: Simple Linear Regression</a>	In our opinion, the video describes the basic idea behind linear regression models pretty good. If you are familiar with linear regression models, you can also skip this video. Those who have struggled with understanding linear regression models in the past might benefit from watching this video, though.
3.	Solve Task 1-7 of the exercise sheet.		Download and open the R -Script template that is provided on the SSRC website to insert your solutions in RStudio.  Tasks 4-7 are identical to Tasks 4-7 from the Chapter 4 exercise sheet. To save time, you could copy and paste from the respective solution.
4.	Read subchapter 15.1 from "YaRrr! The Pirate's Guide to R"	<a href="#">Text: The Linear Model</a>	
5.	Read subchapters 15.2 and 15.2.1 from "YaRrr! The Pirate's Guide to R"	<a href="#">Text: Estimation with lm()</a>	
6.	Solve Tasks 8-9 of the exercise sheet.		
7.	Read subchapter 15.2.2 from "YaRrr! The Pirate's Guide to R"	<a href="#">Text: Getting Model Fits</a>	
8.	Solve Tasks 10-12 of the exercise sheet.		
9.	Read subchapters 15.2.3 from "YaRrr! The Pirate's Guide to R"	<a href="#">Text: Prediction</a>	

10.	Solve Tasks 13-14 of the exercise sheet.		
11.	Watch the following Video.	<a href="#">Video: Extract Regression Coefficients</a>	
12.	Solve Task 15 of the exercise sheet.		
13.	Watch the following Video.	<a href="#">Video: Introduction to Logistic Regression</a>	This video describes the rational behind logistic regression. If you are already familiar with this topic, you can save time by skipping. For everybody who has doubts regarding their logistic regression skills this video might be very helpful.
14.	Read subchapters 15.4 and 15.5 from "YaRrr! The Pirate's Guide to R"	<a href="#">Text: Logistic Regression</a>	In subchapter 15.5, only the first part about logistic regression is relevant.
15.	Solve Task 16-18 of the exercise sheet.		
16.	Compare your solutions to the sample solution provided on the SSRC website.		