Goskills

Regression Analysis Fundamentals

GoSkills online course syllabus

Skill level
Beginner

Lessons
17

Pre-requisites
No prior experience needed

Video duration
53m

Estimated study time
53m 5s

Instructor
Fro Carducci

Introduction

1 Identify what regression helps you see
Regression helps you make sense of patterns in data—and show others why those patterns matter.

Laying the Groundwork

2 Understand the basics of OLS regression
OLS is the foundation of most regression work—it's the rule behind the line of best fit.

3 Know the different regression types
Regression isn't one-size-fits-all.

Run Your First Regression

4 Choose the best regression tool
Whether you use Excel or R, each program makes regression accessible in its own way.

5 Run a simple regression in Excel
Excel makes it easy to run basic regressions if you know where to click.

6 Use SPSS to analyze data with regression
Point-and-click interfaces like SPSS offer robust regression options.

7 Run a linear model in R using code
R is powerful for reproducible, flexible analysis—especially with just a few lines of code.

Interpret and Visualize Your Results

8 Understand what regression output means

Every regression model creates output, but not all numbers are equally important.

9 Check model assumptions

OLS regression assumes your data meets certain conditions—like linearity, independence, and constant variance.

10 Evaluate correlation vs. causation

Regression reveals relationships, but it doesn't always prove cause and effect.

11 Checking goodness-of-fit and R^2

Go beyond coefficients and p-values.

12 Handling outliers and influential points

Sometimes data points are truly dramatically different from the rest, and sometimes they could just be an error.

Share Your Findings with Confidence

13 Create clear charts

Charts help others quickly grasp the insights behind your model.

14 Translate your results into insights

Non-technical audiences need clear takeaways, not technical jargon.

15 Tell the story behind your data model

Telling a story makes your findings more memorable and persuasive.

16 Visual storytelling with regression

In this lesson, you'll discover how to combine regression outputs, visuals, and narratives into a compelling presentation that connects insights to decisions.

Conclusion

17

Apply your regression skills in projects

Congratulations on completing this course!

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