Welcome to Linear Modeling in R. My name is Clay Ford. I'm a statistician with the UVA Library. The UVA Library provides free statistics consulting to UVA students, faculty and staff and that's what I do: I help people with the statistical analysis of their research data. My colleagues and I also teach workshops like this one, where we share some of our expertise.

Today's workshop is intended to introduce you to linear modeling or multiple regression in R. This is a massive topic and we’re not going to master it in 90 minutes. However I do think it’s possible to learn some fundamentals and develop some intuition for linear modeling without wading into lots of math and theorems. Just like it’s possible to show a teenager how to drive a car without getting into how the engine and transmission works.

We could have made this workshop available as a pre-recorded video, but we decided to offer it as a Zoom meeting to make it live and interactive and give you the chance to ask questions. I hope you’ll feel comfortable speaking up and participating. “Hey Clay, what if we wanted to graph this, or is there a way to do this other thing that’s related to my research, or can you go back and explain that again.” This is all about you today, so please don't be shy about either speaking up or typing something in the Zoom chat. This is pretty informal. Plus I think workshops are more interesting and useful when people are asking questions. No pressure, but do let us know if you’ve got something on your mind.

I’m joined today by [NAME]. [NAME] is our [JOB TITLE]. They’re going to follow along and monitor the chat. They’ll either answer the question or interrupt me to let me know someone has a question. They also may chime in from time to time to let me know if I skipped something or misspoke. Thank you [NAME].

So let's get started. Hopefully you received an email with a link to download some workshop files. If not, the link is available in the chat window. The workshop files are in a ZIP file. After you download it you'll need to unzip it. There are two files. One is a slide deck that is for your reference. It summarizes what we’re going to cover today but we’re not going to look at it. The other is a Rmd file, or R Markdown file, which I'm going to ask you to open in RStudio. That's what we're going to use today to learn more about ggplot.

The goal today is that you and I will both use RStudio at the same time to learn about linear modeling. You’ll watch me do something in RStudio and then try to do it yourself. That can be challenging in a Zoom meeting like this. If you have one computer screen, what I suggest is that you arrange two windows side-by-side on your computer screen. Resize the Zoom window to fill the left side of your screen, which will be my computer screen I’m sharing with you, and resize RStudio to fill the right side. So this is for people who actually want to follow along, run some code, and do the exercises. If you’d rather just watch and take a few notes, that’s totally fine. This isn’t a class where I’m going to call on you for answers or ask you turn in homework for a grade. You’re welcome to just watch.

[show video, does not apply to those with dual monitors, Turn off side-by-side mode in Zoom]