

PS 312: Programming with R

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Introduction



- Experienced R user (20+ years)
- Daily R user
- Co-organizer of Statistical Programming DC meetup
- Co-chair of Bioinformatics and Data Science Department, FAES Graduate School at NIH
 - Teaches highly rated **Practical R** and **Data Visualization with R** courses
- Chief Data Scientist at [Zansors](#), a healthcare analytics startup in Arlington, VA
- Statistical consultant for NIH

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- Present at R conferences
 - DC R conference
 - useR! conference
- [Blogger](#) about statistics and R
- Active on Twitter with `#rstats`
- Excited about continuing changes and improvements to the R ecosystem

Expectations

We're not pointing or clicking

- We will be writing code in this class
 - Succint instructions to the computer to do things
 - R will be our **language** of choice in doing this
- This is sort of old school
 - No point-and-click when I started in the late 90s
 - But it's very effective once you learn it

We're not pointing or clicking

- I don't expect you to learn all the details in 3 days
 - But I'll give you resources to learn more
 - And point to where you might get questions answered
- It won't all be simple
 - I want you to be able to **use** R
 - Sometimes that means learning some more advanced material
 - I'll go slow with it, and try to get the mental model to you

A practical view

- This will not be a geeky computer science class
- This will be a modest refresher on statistics
 - If you hated stats before, maybe I'll change your mind
 - If you actually learned stats before, maybe I'll give you a fresh view
- This will be about
 - learning good enough practices
 - making analyses reproducible
 - creating complete products
 - raw data to reports

A modern view

- I'll keep things as current as I can
 - R has evolved a lot in 20 years
- Maybe some of it will even excite you
 - Interactive graphics
 - Reproducible and repeatable reports
 - Mistake-free data-driven presentations
 - Cutting edge analyses
 - Supportive community

Workshop format

- Mostly expository
- Some hands-on
- Use your post-its and stickers to get my attention
- Use post-its for questions/comments
- Ask questions if you're confused

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