

Open Resources for Teaching Statistics

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Many degrees of Openness



Common characteristics

- ▶ Online

Many degrees of Openness



Common characteristics

- ▶ Online
- ▶ No access restrictions

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- ▶ Online
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- ▶ No cost

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Common characteristics

- ▶ Online
- ▶ No access restrictions
- ▶ No cost
- ▶ Free-to-modify

Many degrees of Openness



Foundation for Open Ac

Philosophy

The mission of FOAS is *to promote free software, open access publishing, and reproducible research in statistics*. We understand [free](#) software to be as defined by the [Free Software Foundation](#): possible to run for any purpose, available in source code form, and free to modify and/or redistribute. Open access forums for papers are, for us, defined as those that allow free access to all readers with an internet connection, and that invite contributions from authors without requiring the payment of fees.

- Free software

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- ▶ Free software
- ▶ Open access publishing

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- ▶ Free software
- ▶ Open access publishing
- ▶ Open source educational resources

Many degrees of Openness

Open access publishing

- ▶ Free to submit, free to read
- ▶ Eg: JSS

Open source educational resources

- ▶ OpenIntro
- ▶ StatsTeachR

OpenIntro

About 10 minutes of content

What is statsTeachR.org?

The basics

- ▶ a new, open-access, online repository with modular lesson plans
- ▶ materials targeted at undergraduates and graduates
- ▶ topics: stats, biostats, statistical computing with R

Modules

- ▶ each curricular “module” focuses on teaching a particular statistical subject or concept
- ▶ can be browsed à la carte

statsTeachR.org

Website tour: statsTeachR.org

statsTeachR enables collaborative curriculum development

Some ongoing experiments for building curriculum

- ▶ graduate students are creating modules as final projects in core Biostat classes at UMass
- ▶ co-development of materials for similar classes (UMass-Amherst and Columbia Univ)

Discussion questions

- ▶ where does the time/money/person-hours come from to generate these resources?
- ▶ how to incentivize these kinds of contributions appropriately?
- ▶ how to control quality of resources?