DATA SCIENCE SEMINAR SERIES 02
FALL, 2016

WEEK 01

PLOTS & FIGURES IN R

INTO TO R AND SCRIPTING

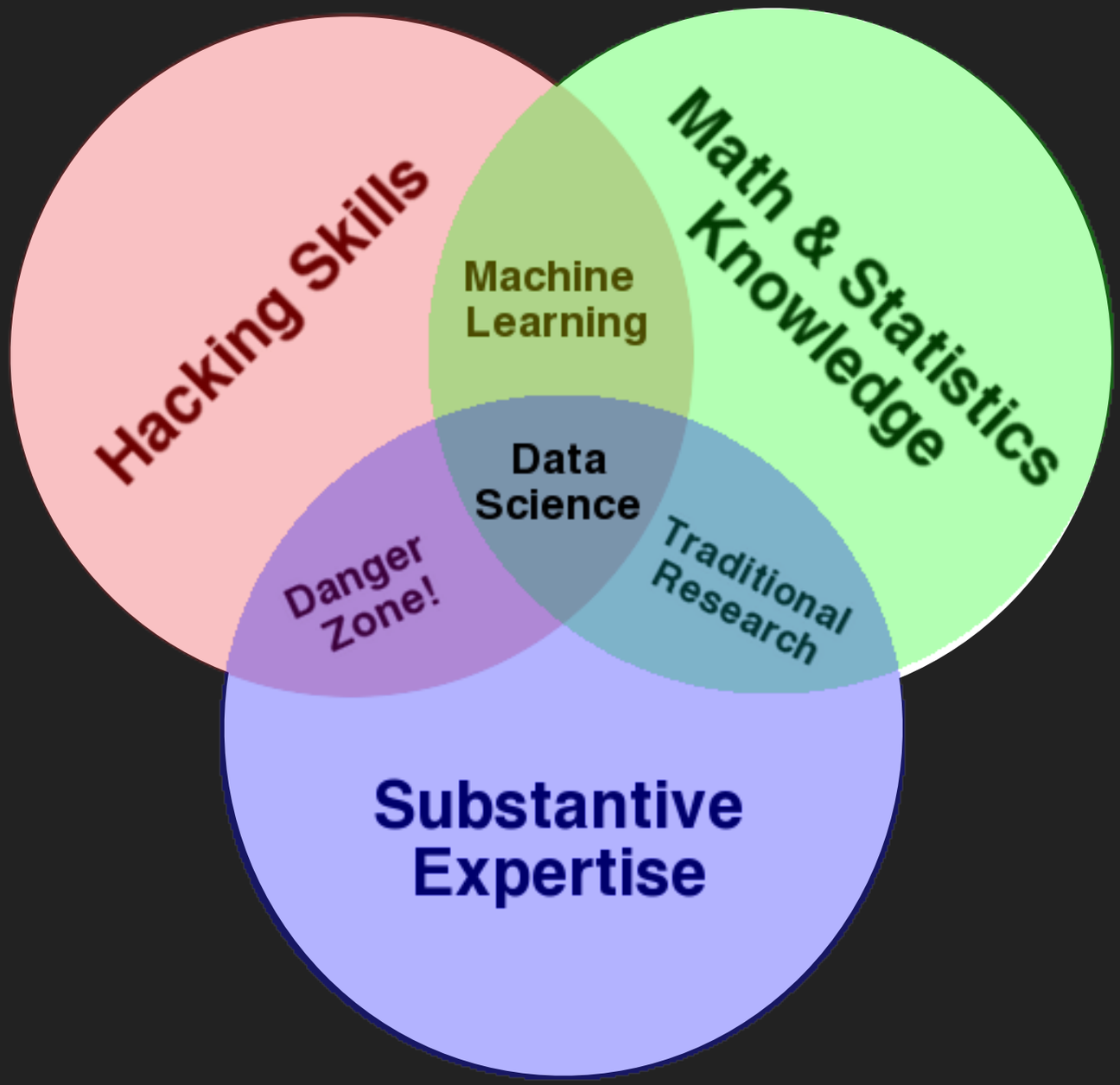
AGENDA

1. Introductions
2. Seminar Overview
3. Introduction to `R`
4. Scripting for `R`

1 INTRODUCTIONS

2 SEMINAR OVERVIEW

WHAT IS DATA SCIENCE?



SEMINAR OVERVIEW

R

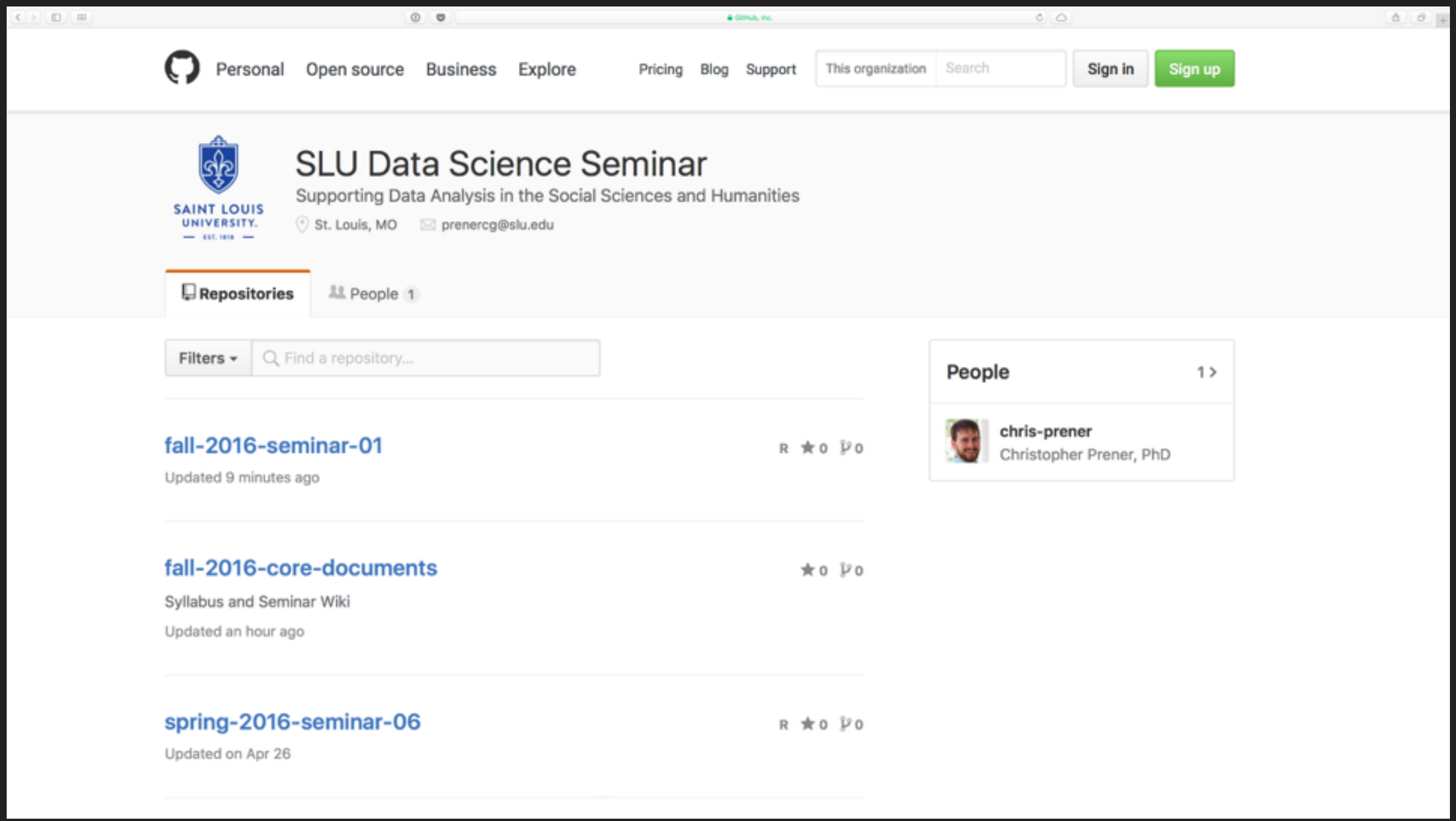
RStudio

GitHub.com

2. SEMINAR OVERVIEW

GitHub

https://github.com/slu-data-science-seminar



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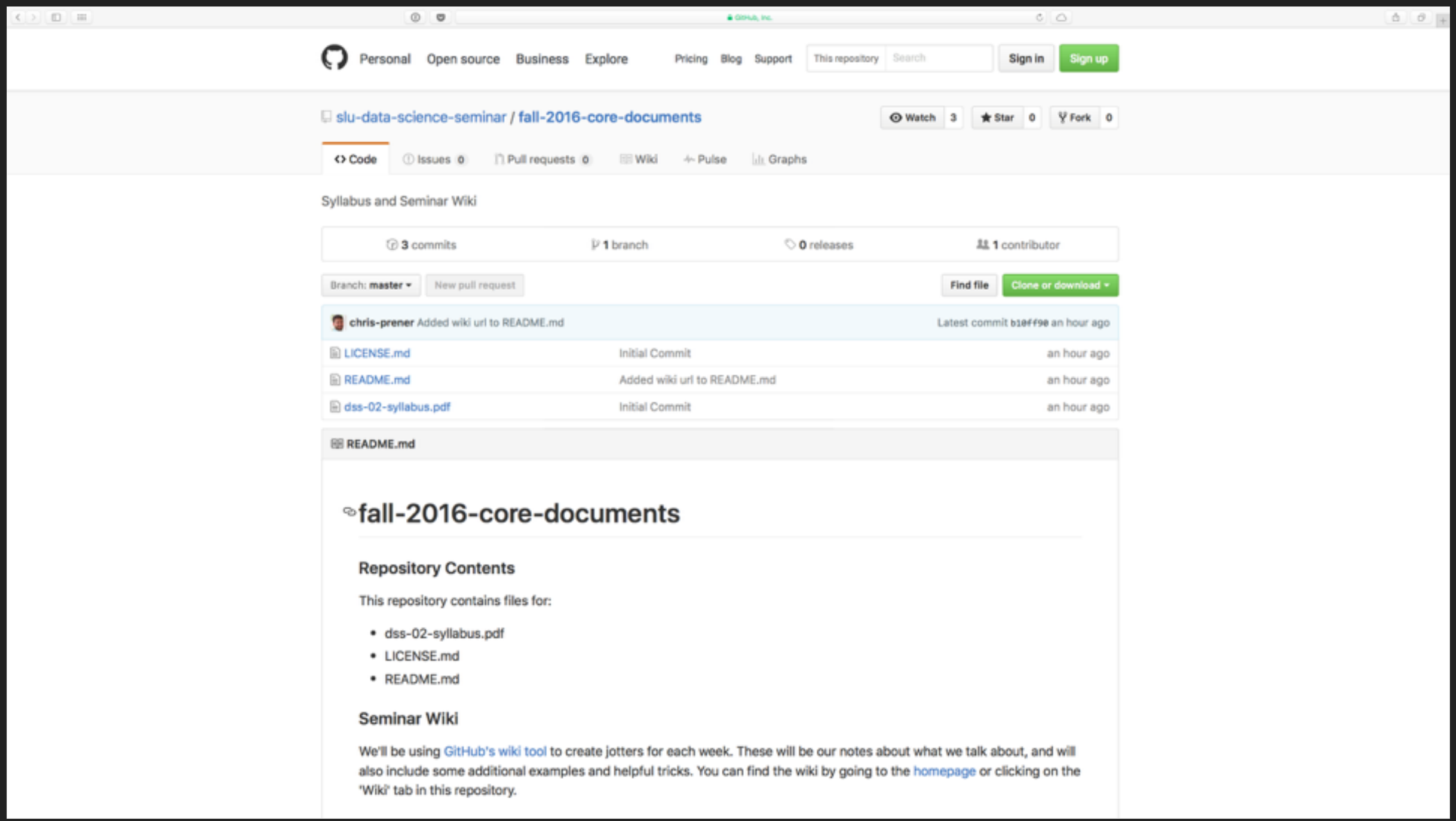

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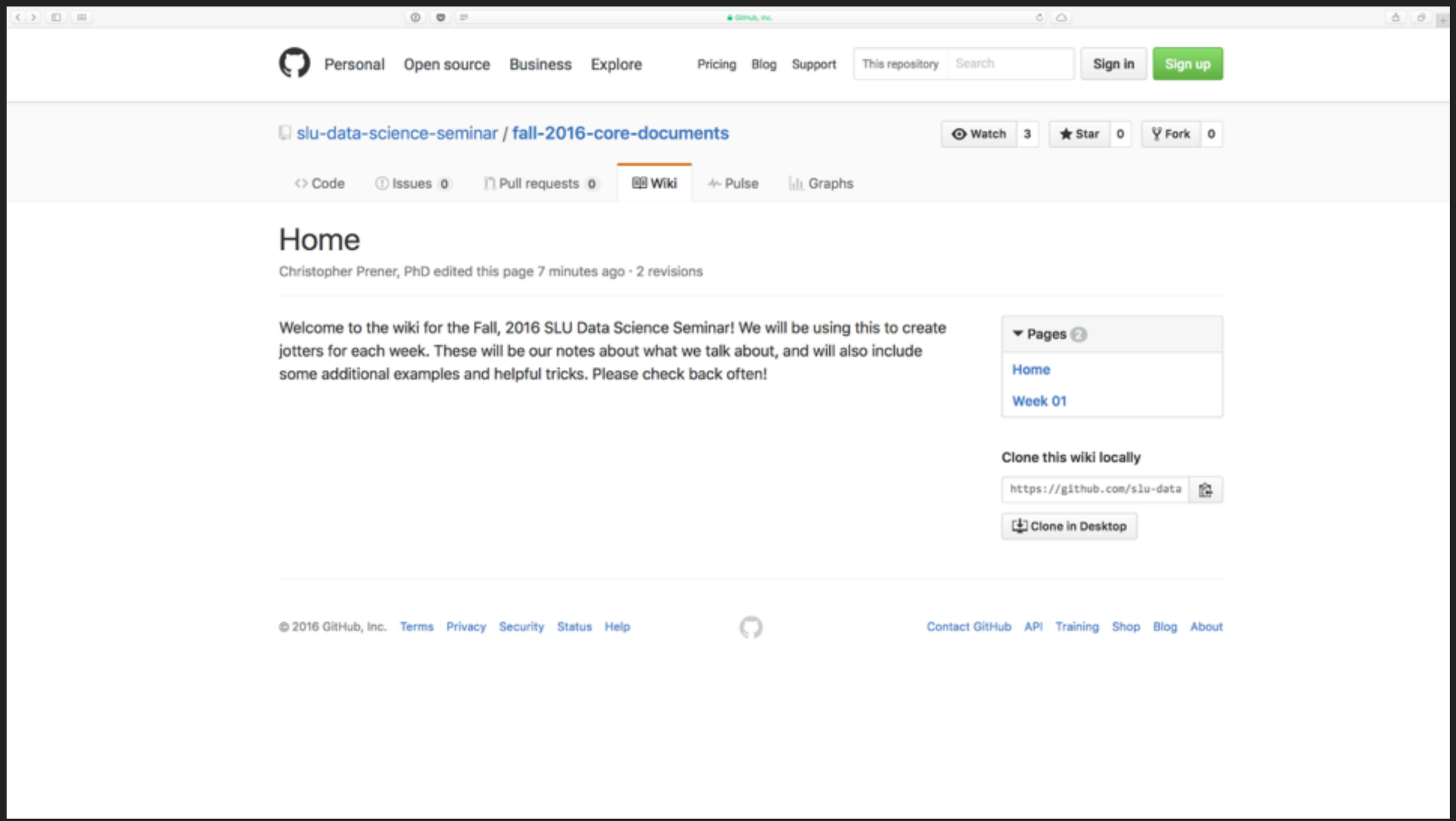

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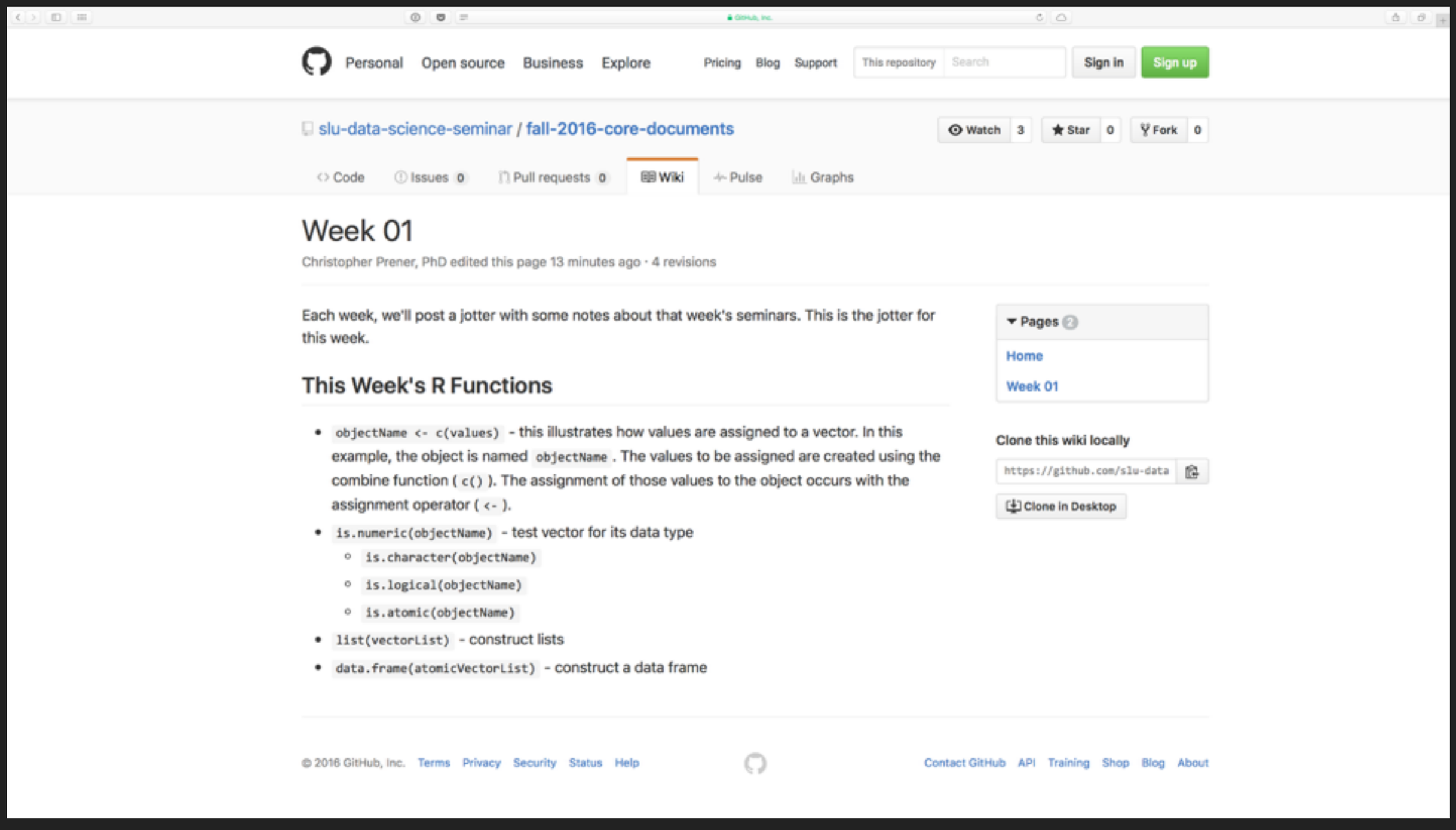
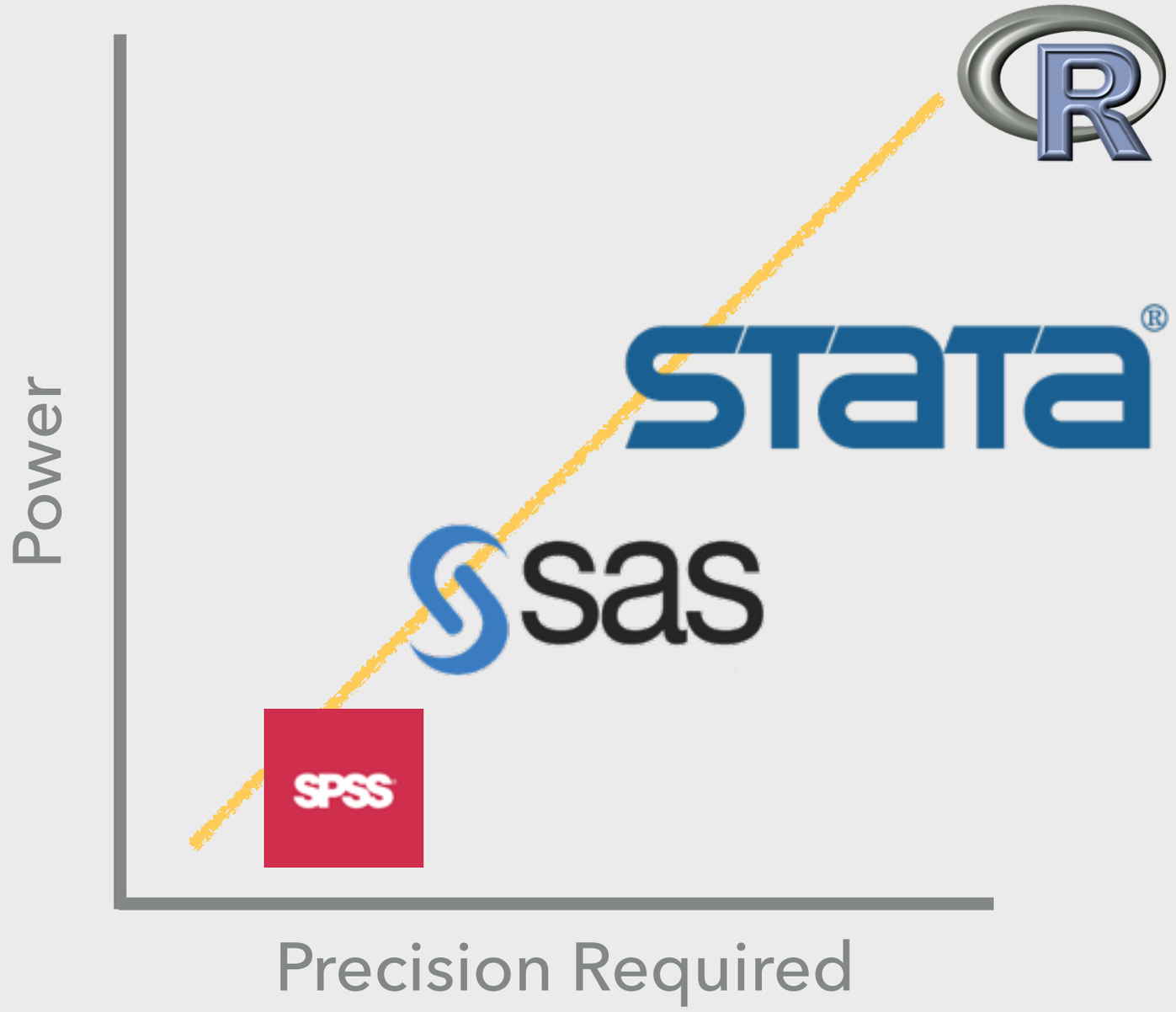


3 INTRO TO R

DEMANDS OF STATS PACKAGES



IMPLICIT CONTRACT WITH THE COMPUTER / SCRIPTING LANGUAGE: COMPUTER WILL DO TEDIOUS COMPUTATION FOR YOU. IN RETURN, YOU WILL BE COMPLETELY PRECISE IN YOUR INSTRUCTIONS. TYPOS MATTER. CASE MATTERS. GET BETTER AT TYPING.

Jenny Bryan, PhD

University of British Columbia Stats/Data Science Prof

4 SCRIPTING FOR R

LET US CHANGE OUR TRADITIONAL ATTITUDE TO THE CONSTRUCTION OF PROGRAMS: INSTEAD OF IMAGINING THAT OUR MAIN TASK IS TO INSTRUCT A COMPUTER WHAT TO DO, LET US CONCENTRATE RATHER ON EXPLAINING TO HUMANS WHAT WE WANT THE COMPUTER TO DO.

Donald E. Knuth

Stanford University Computer Scientist

NAMING CONVENTIONS COUNT

- Be consistent with how you name objects
- Names should be intuitive
- A vector representing gender should ideally be named ‘gender’, not z4
- Names should be formatted consistently:

```
some_people_use_snake_case

other.people.use.periods

iUseCamelCase
```

DOCUMENTATION COUNTS

```
# This is a comment. Comments are highlighted green. There are no
# multi-line comments. If you want to continue writing a comment
# you need a new number sign. Use comments extensively!

# These are examples of dividers:
# ==============================================================
# ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
# Dividers make your code easier to read. Use them!
```