

Model for Intro Data Science: SDS 192

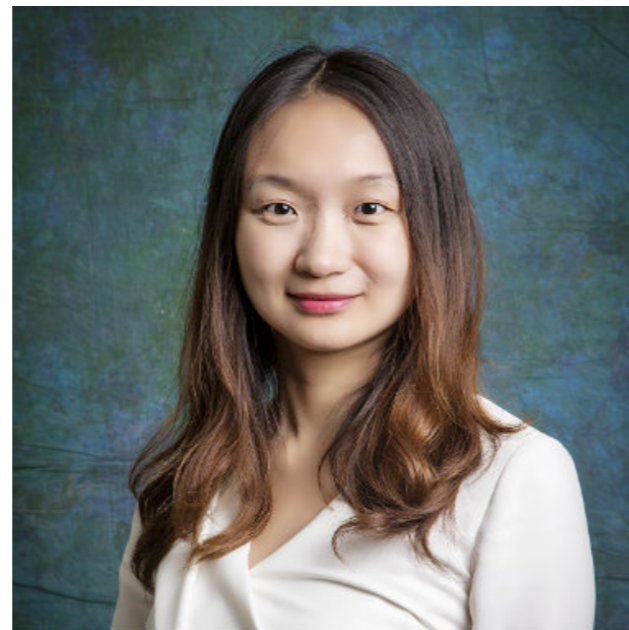


Prof. Albert Y. Kim akim04@smith.edu

DSC-WAV FacDev 22

Tuesday, June 14, 2022

SDS192 starting lineup



Basic Structure

- No pre-requisites, no prior programming, *no inferential statistics covered (p-values or CI)*
- 🎯: Get students 😜😄😘 about data
- We all do:
 - Mini-project 1: Data visualization 📊
 - Mini-project 2: Data wrangling 🛠️
 - Data ethics sprinkled throughout 🤔
- Then for Mini-projects 3, 4, ...
 - Ben: Maps, SQL
 - Myself: Maps, building webpages (demo)
 - Lindsay: Data ethnography & API's
 - Shiya: ?
 - Jared: ?

Show don't tell: leaflet maps

Run this in R:

```
library(leaflet)
leaflet() %>%
  addTiles() %>%
  addMarkers(lng=-72.6403, lat=42.3163, popup="Where's Waldo?")
```

Show don't tell: EDA for models

Example lab using these  created from scratch by Beth Brown at Greenfield Community College: [Data analysis](#) of palmerpenguins package data

```
> library(palmerpenguins)
> penguins
# A tibble: 344 × 8
  species island bill_length_mm bill_depth_mm flipper_length_mm body_mass_g sex    year
  <fct>   <fct>         <dbl>         <dbl>         <int>         <int> <fct> <int>
1 Adelie  Torgersen      39.1          18.7           181           3750 male   2007
2 Adelie  Torgersen      39.5          17.4           186           3800 female 2007
3 Adelie  Torgersen      40.3          18             195           3250 female 2007
4 Adelie  Torgersen      NA            NA              NA            NA NA     2007
5 Adelie  Torgersen      36.7          19.3           193           3450 female 2007
6 Adelie  Torgersen      39.3          20.6           190           3650 male   2007
7 Adelie  Torgersen      38.9          17.8           181           3625 female 2007
8 Adelie  Torgersen      39.2          19.6           195           4675 male   2007
9 Adelie  Torgersen      34.1          18.1           193           3475 NA     2007
10 Adelie Torgersen      42            20.2           190           4250 NA     2007
# ... with 334 more rows
> |
```

Anecdote: Spinelli Tutoring Center

Student TA's who do:

- Evening drop-in tutoring center
- In-class “data assistants”

