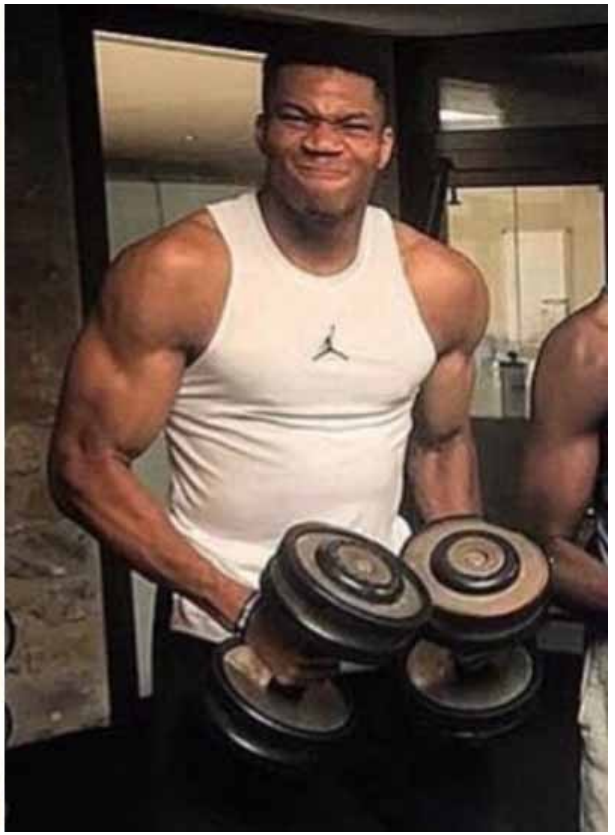
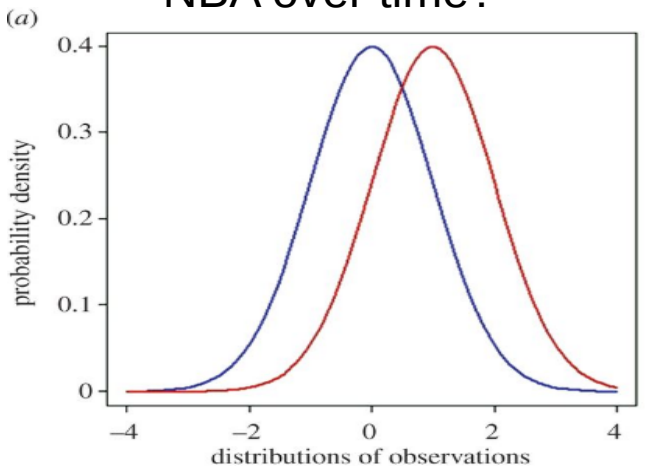
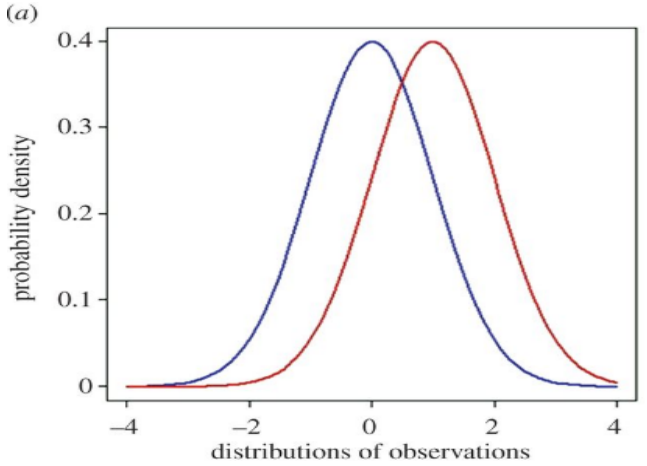
NBA players are taller and heavier than ever



NBA over time?



US vs Foreign players?



Is bigger always better?

Design planning process

Audience: Sports lovers

- like:
  - + **short** and direct story telling
  - + **simple** analysis
  - + **easy** to observe data and make comparison

- dislike:
  - + complicated maths
  - + distracting visual cues
  - + irrelevant information

Design planning process

Planned content:

- Visual tools to show distributions of data
- Statistics tool to make comparisons
- Search tool

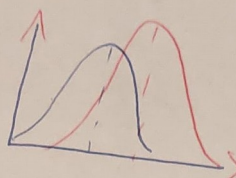
Backend:

- Run simple queries in R to filter, fetch data
- Embed a t-test for two samples by user's choice

Options for charts/graphs:

- Simple charts for distribution discovery: boxplot, kernel denstity
- Showing trend: Scatterplot with fitting line.

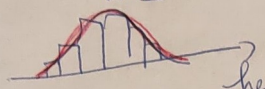
Sheet 1:



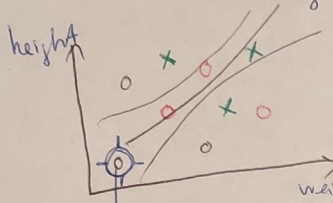
US
Brazil

height / or weight

BMI



height / or weight



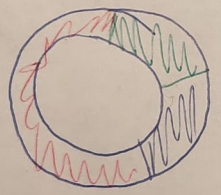
country 1
country 2
country 3

→ of team 1 team 2 team 3

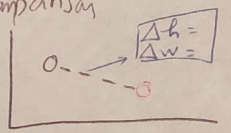
→ of Asian, Amer North, Amer South, Aus, Eu, African

tool tip -name

zoom + opacity → 1.



Comparison



? too crazy

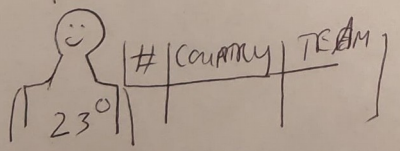
Heatmap

Opts:

Country | Draft
TEAM | College

height / weight / age / PER

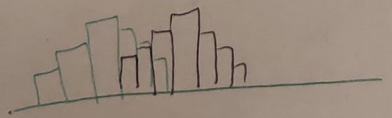
show profile



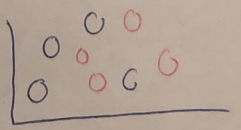
test

output t-test

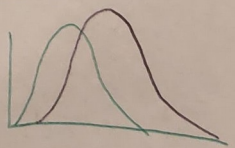
if else H0 of H



vs



vs

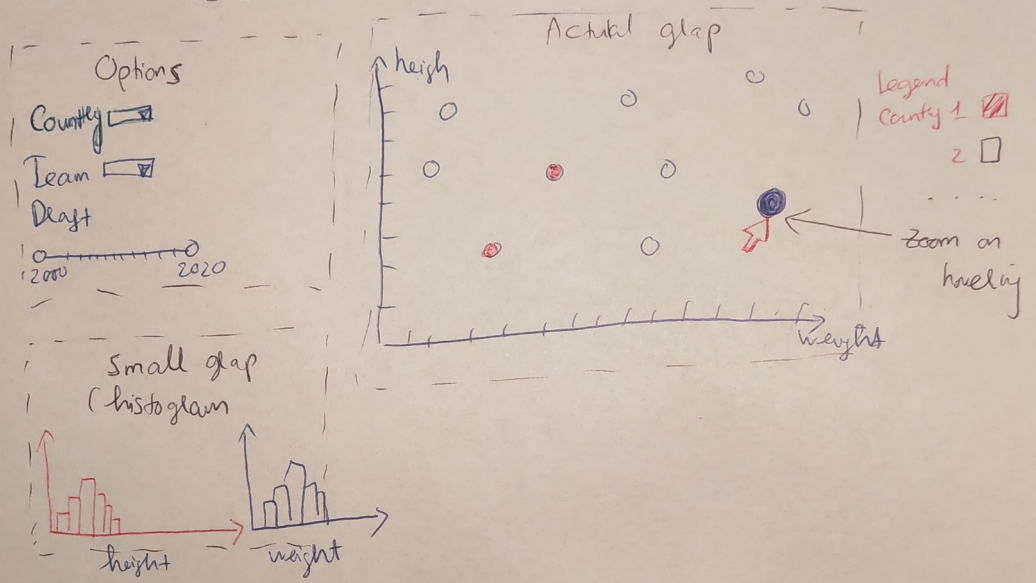


?

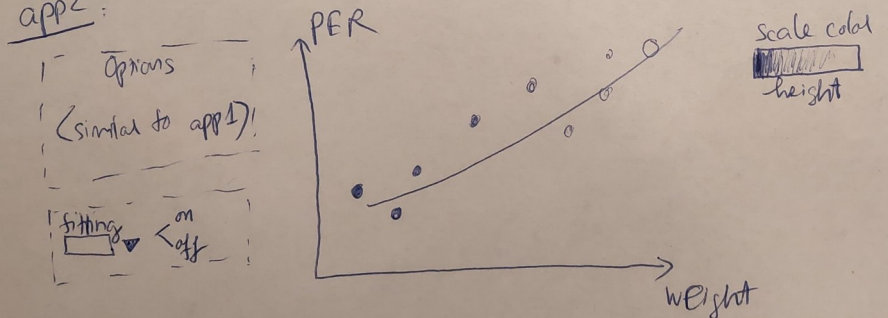
Sheet 2

title: Solution 1
author: Tung Ng
Date: 25 May 2020

app1: Title of graph



app2:

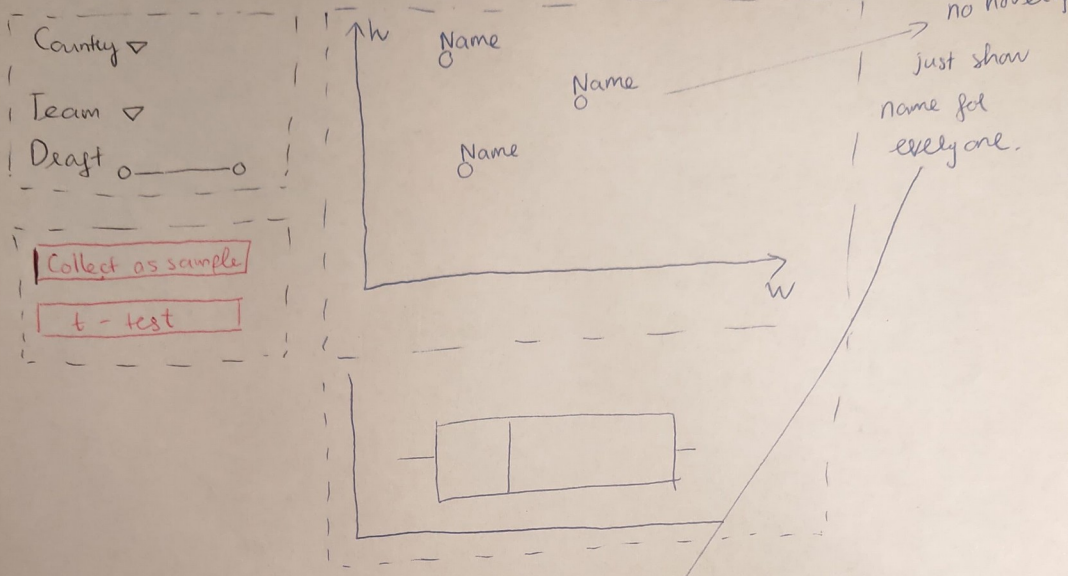


- disadvantages: – app2: scale colal fal heigh is distracting.
  – legend fal canty in app1: may not be necessaly.
- advantages: – Solid options: Cantry, Team
  – haveing is cool, should be in app2 as well.
+

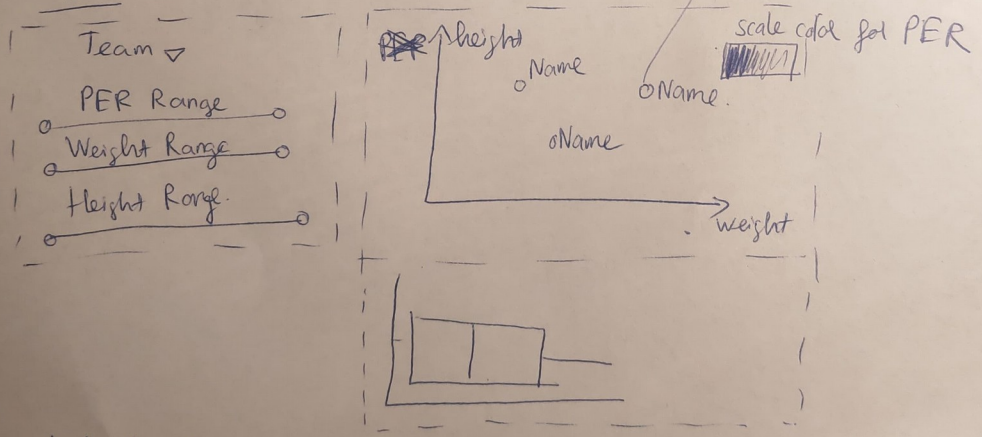
Sheet 3

title : Solution 2.
author : Thuy Ng
Date : 25 May 2022

app 1 : Reactive title



app 2



- disadvantages : - show names may be too overcroded.
- use a single button for collection may prone to missing

⇒ suggestion : - messages / noti ...

~~Simplify~~

- drop height or weight for app2 because scale color is still distracting (maybe)

Sheet 4

title: Solution 3
author: Thy Ng
Date 25 May 2020

app 1

Reactive title

Nationality
Draft Period
Pick 1st sample
Pick 2nd
t-test
Notification

h
info
w

Key focus: print out t-test and interpret it

Sp 1
Sp 2

app 2:

Height
PER
Team
Fitting line

PER
info
height

color
scale for PER only

- maybe difficult to implement tooltip like this, but it looks really good!
- kernel for app 1 is spot on, boxplot for app 2 is also a good choice.

Sheet 5

app 1: - The Layout looks like in sheet 4

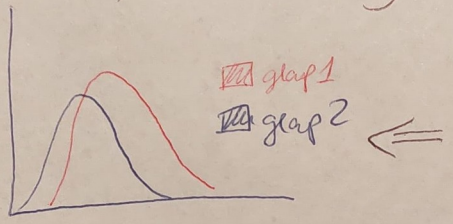
- libeary used: scatterD3 : allows zooming, dragging

- need some helper functions (available ones) to manipulate data before feeding the plotting function: the overlayed density plot requires a specific kind of data that I don't have in stock, but have to generate AT RUN TIME upon users' interaction.

group 1 ← c(200, 210, 198, 213)
group 2 ← c(199, 222)

⟹

group	value
g1	200
g1	210
g1	198
g1	213
g2	199
g2	222



⟸

app2: - The layout looks like in sheet 4

- cannot use scatterD3 here because in this app we have more customizations (fitting line) ⟹ tool tip basic by string. Not as sleak.