### Data visualisation and statistical modelling in Shiny

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#### Overview

Introduction to Shiny

How to share a Shiny application

My attempts at creating Shiny applications

htmlwidgets, showmeshiny, radiant, shinystan and all that jazz

## But first...

► Top 3 box-office hits in the world

▶ Top 3 box-office hits in the world

3. Lost World: Jurassic Park



▶ Top 3 box-office hits in the world

- 2. Men in Black
- 3. Lost World: Jurassic Park





- ▶ Top 3 box-office hits in the world
  - 1. Titanic
  - 2. Men in Black
  - 3. Lost World: Jurassic Park









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- No need to learn HTML, CSS, JavaScript.

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- Shiny has become increasingly popular; thus you can find lots of how-to-start tutorials online.

(my personal favourite is Dean Attali's tutorial)

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- You can create a Shiny app by making a new directory and saving the ui.R and server.R files inside it.
- ► You just need to run runApp() to see your application.

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- Each method has its own advantages.

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- ▶ Top 3 rated TV shows in the US
  - 1. Seinfeld
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#### Crimes in the communities of Chicago from 2002 to 2015

Reported incidents of crime (with the exception of murders) that occurred in the city of Chicago from 2002 to present.<sup>2</sup>

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- Can we create a more generic application where one can upload their own spatio-temporal data set? Yes, we can

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#### General comments

- Shiny provides a quick way of presenting your data interactively.
- ► Great for engagement with non-statisticians/general public.
- Shiny is still in development but it has an excellent community support.
  - (i.e. shiny-discuss Google group, shiny tag on Stack Overflow)

- Things become a bit tricky (or rather expensive) when it comes to
  - privacy and security of the data and/or
  - the amount of memory needed for your application.

# And finally...

▶ Top 3 singles music chart in the UK

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#### 3. Barbie Girl (Aqua)



▶ Top 3 singles music chart in the UK

- 2. Candle In The Wind (Elton John)
- 3. Barbie Girl (Aqua)





- Top 3 singles music chart in the UK
  - 1. I'll Be Missing You (Puff Daddy & Faith Evans)
  - 2. Candle In The Wind (Elton John)
  - 3. Barbie Girl (Aqua)







# Thanks for listening