

# Pivotal

Pivotal Beamer Template  
Example Presentation

Ronert Obst, Data Scientist

January 2, 2014

- 1 First Section
- 2 Second Section
- 3 Some Code

# First Section

- Big data
  - ① Next generation data science
  - ② Elastic deep learning
- Industry 8.0
- IoT 5.0
- More cloud → more winning

# Two columns

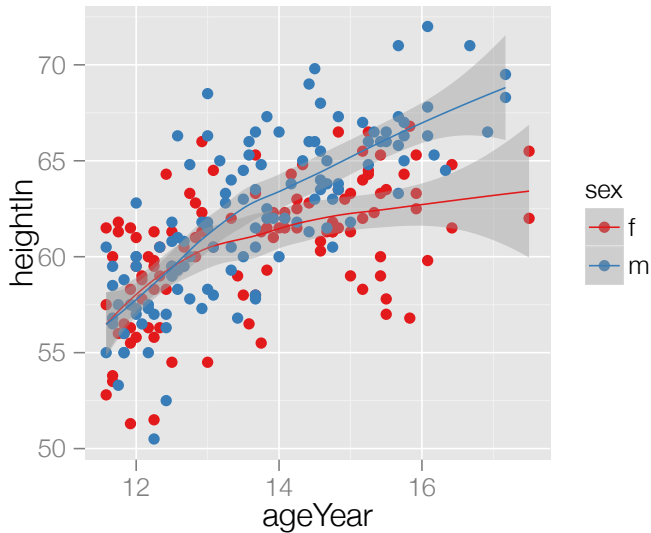
- Considering the aspect ratio is 16:9
- It is probably a good idea to use two columns
- To avoid really long lines
- Typesetting just looks nicer than in PowerPoint
- And it can be versioned!
- Some other content on this side
- Big data
- More big data
- Hadoop
- GPDB
- MADlib
- $x + y = z$

## Let us create a plot with ggplot2

- ggplot2 is a really nice plotting library
- It can export graphics using TikZ
- Which look really nice in L<sup>A</sup>T<sub>E</sub>X

```
1 library(ggplot2)
2 library(gcookbook)
3 sps <- ggplot(heightweight, aes(x=ageYear, y=heightIn, colour=sex))
4 + geom_point()
5 + scale_colour_brewer(palette="Set1")
6 sps + geom_smooth()
```

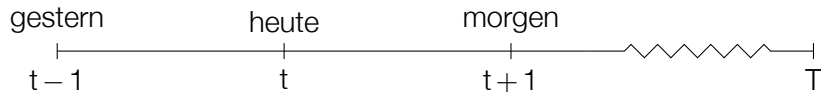
## The plot using TikZ



## Second Section



## A timeline using TikZ



- Coriolis acceleration

$$\vec{a}_p = \vec{a}_o + \frac{d^2}{dt^2} \vec{r} + 2\vec{w}_{ib} \times \frac{d}{dt} \vec{r} + \vec{\alpha}_{ib} \times \vec{r} + \vec{w}_{ib} \times (\vec{w}_{ib} \times \vec{r})$$

- Coriolis acceleration

$$\vec{a}_p = \vec{a}_o + \frac{d^2}{dt^2} \vec{r} + 2\vec{w}_{ib} \times \frac{d}{dt} \vec{r} + \vec{\alpha}_{ib} \times \vec{r} + \vec{w}_{ib} \times (\vec{w}_{ib} \times \vec{r})$$

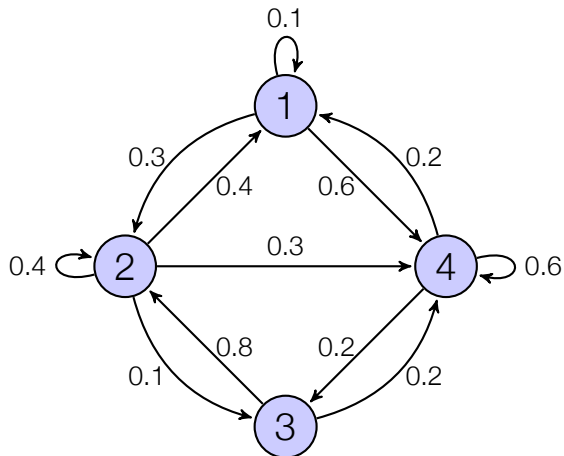
- Transversal acceleration

- Coriolis acceleration

$$\vec{a}_p = \vec{a}_o + \frac{d^2}{dt^2} \vec{r} + 2\vec{\omega}_{ib} \times \frac{d}{dt} \vec{r} + \vec{\alpha}_{ib} \times \vec{r} + \vec{\omega}_{ib} \times (\vec{\omega}_{ib} \times \vec{r})$$

The equation is displayed with four colored regions highlighting specific terms: a blue box around the Coriolis term  $2\vec{\omega}_{ib} \times \frac{d}{dt} \vec{r}$ , a red oval around the Euler acceleration term  $\vec{\alpha}_{ib} \times \vec{r}$ , and a green box around the centripetal acceleration term  $\vec{\omega}_{ib} \times (\vec{\omega}_{ib} \times \vec{r})$ . Arrows point from the list items below to these highlighted terms: from 'Coriolis acceleration' to the blue box, from 'Transversal acceleration' to the red oval, and from 'Centripetal acceleration' to the green box.

- Transversal acceleration
- Centripetal acceleration



Some Code

- Pygments via `minted` has syntax highlighting for all major languages

```
1  # List comprehensions
2  num = [1, 4, -5, 10, -7, 2, 3, -1]
3  filtered_and_squared = [ x**2 for x in num if x > 0]
4  print filtered_and_squared
5
6  # Generators
7  num = [1, 4, -5, 10, -7, 2, 3, -1]
8  filtered_and_squared = ( x**2 for x in num if x > 0 )
9  print filtered_and_squared
10
11 for item in filtered_and_squared:
12     print item
```

# New dplyr package

```
1  library(dplyr)
2  # Built in data frame
3  head(hflights)
4
5  # Coerce to data table
6  hflights_dt <- tbl_dt(hflights)
7
8  # Caches data in local SQLite db
9  hflights_db1 <- tbl(hflights_sqlite(), "hflights")
10
11 # Caches data in local postgres db
12 hflights_db2 <- tbl(hflights_postgres(), "hflights")
13
14 carriers_df <- group_by(hflights, UniqueCarrier)
15 carriers_dt <- group_by(hflights_dt, UniqueCarrier)
16 carriers_db1 <- group_by(hflights_db1, UniqueCarrier)
17 carriers_db2 <- group_by(hflights_db2, UniqueCarrier)
```



```
1  select public.diabetes.diabetes,  
2         madlib.logregr_predict( array[1, times_pregnant,  
3                                 plasma,  
4                                 diastolic_blood_pressure,  
5                                 triceps_skin_fold_thickness,  
6                                 serum_insulin,  
7                                 bmi,  
8                                 diabetes_pedigree,  
9                                 age],  
10         public.diabetes_log_reg_ronert.coef  
11         )::integer as predict  
12  from public.diabetes, public.diabetes_log_reg_ronert limit 100;
```