library(dplyr)
rladies_global %>%
filter(city == 'Bari')
R-Ladies
DATA SCIENCE:
Cambia la tua vita con i dati
8 Marzo 2019
R-Ladies Bari

Chi sono le RLadies?

Community fondata dalla statista **Gabriela de Queiroz**, San Francisco, 2012

OUR MISSION

"Promotes gender diversity in the R community via meetups and mentorship in a friendly and safe environment"

https://rladies.org/

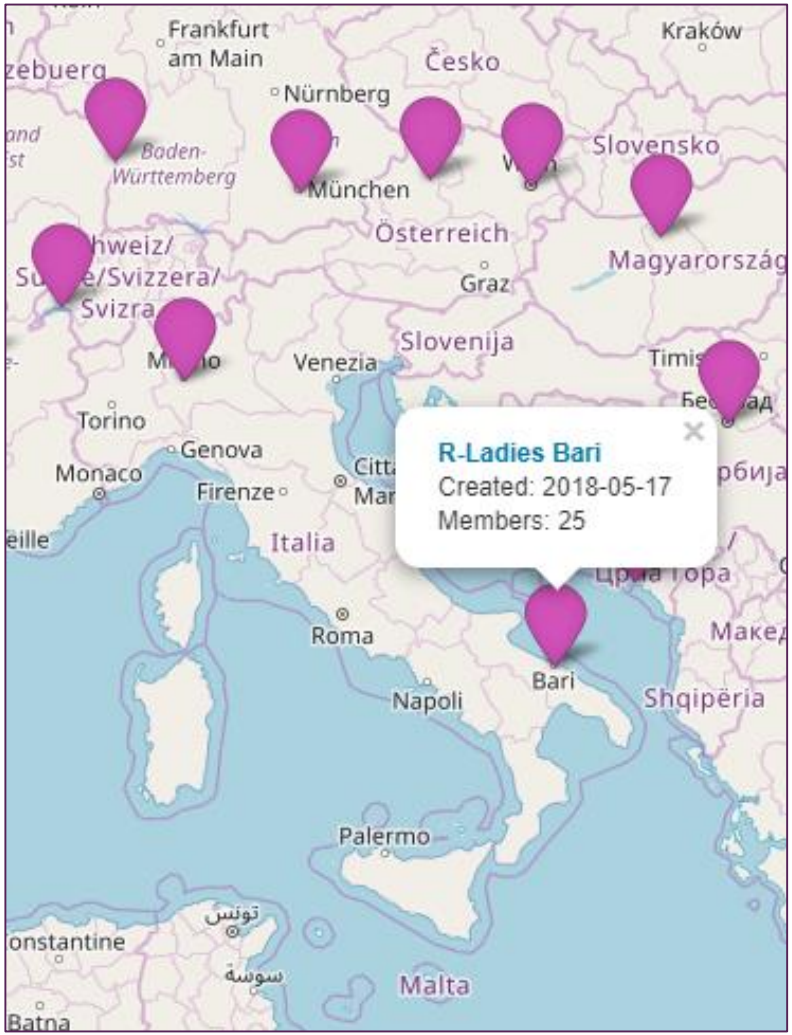
Dove siamo oggi?

141
R-Ladies Cities

45
R-Ladies Countries

141
R-Ladies groups on meetup.com

41286
R-Ladies members on meetup.com



ShinyApp

https://gqueiroz.shinyapps.io/rshinylady/

R-LADIES BARI

Founders of R-Ladies Bari

Giovanna de Vincenzo

- Data scientist @Infocamere
- Laurea in **Economia** @UniBA
- Master **Data Science** @TorVergata
- Interessi: **machine learning**, **analytics**, **data viz** e **innovazione digitale**

Francesca Lamontanara

- Data scientist @Infocamere
- Laurea in **Statistica** @UniBA
- Master **Data Science** @PoliBA & UniBA
- Interessi: **text mining** & **NLP**, **time series analytics** e **stochastic models**

La nostra mission è semplice

Perché siamo qui

- Women leadership
- Community globale
- Passione
- Punto di riferimento
- Nuove idee

I nostri obiettivi

- Meetup mensili
- Facilitare l'apprendimento del linguaggio R
- Incoraggiare le donne a programmare e al mondo scientifico

More Women leader

More Women developer

More Women speaker

Eventi passati

Follow us

3 dicembre ‘18

Kickoff

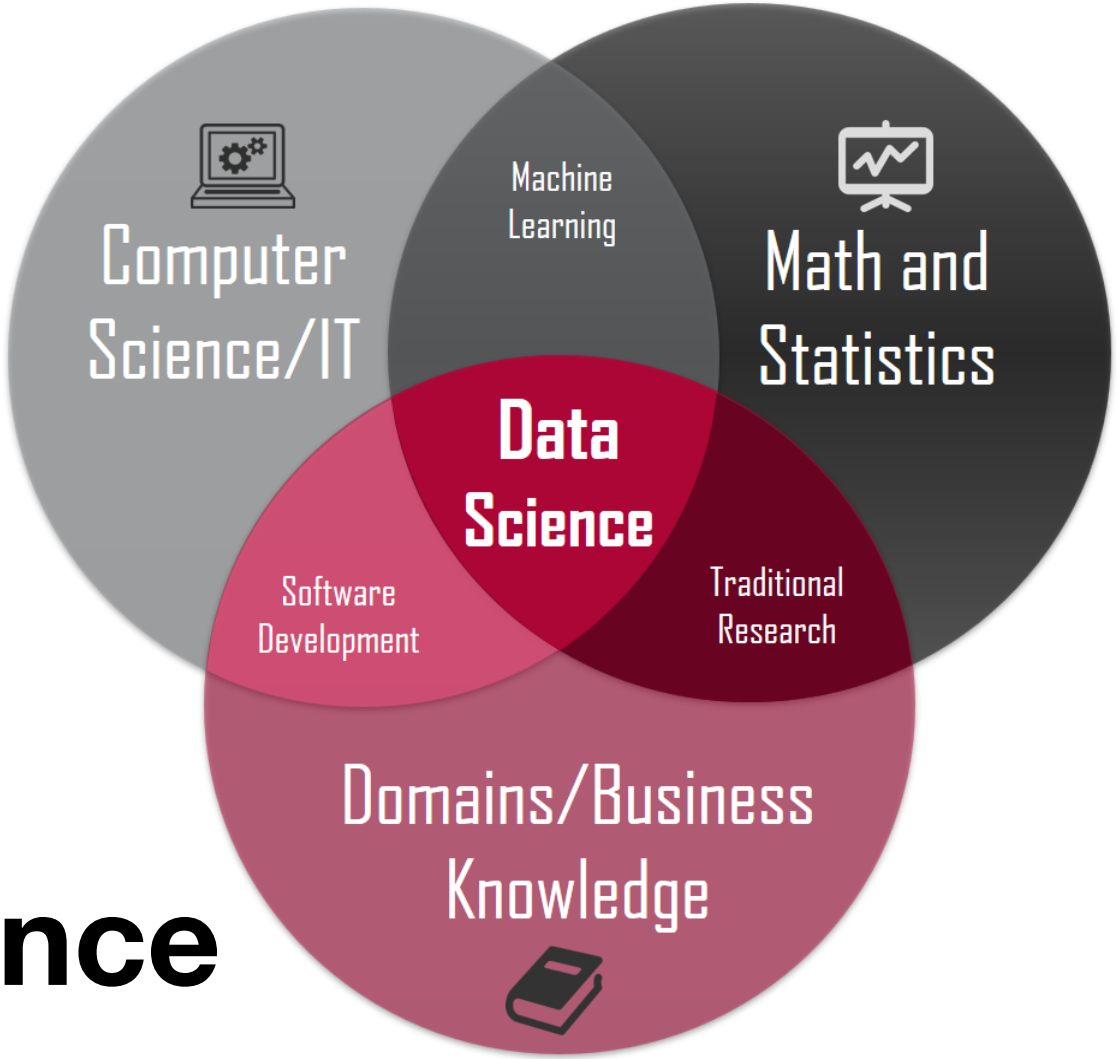
29 Gennaio ‘19

‘Primi passi in R Studio’

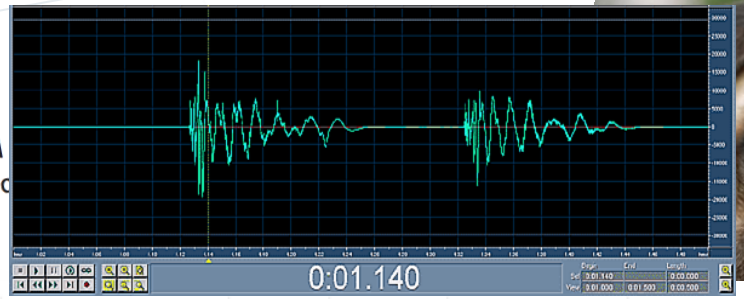
5 Marzo ’19

‘Manipolare i dati con Tidyverse’

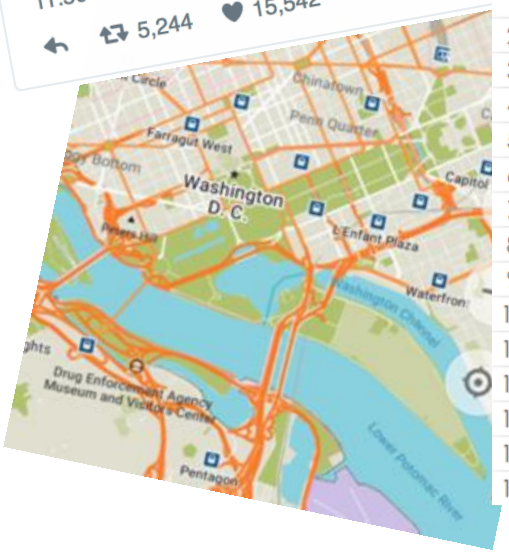
Data Science



Millions of data



	A	B	C	D	E
1	Salesperson	Region	Account	Order Amount	Month
2	Albertson, Kathy	East	29386	$925.00	January
3	Albertson, Kathy	East	74830	$875.00	February
4	Albertson, Kathy	East	90099	$500.00	February
5	Albertson, Kathy	East	74830	$350.00	March
6	Brennan, Michael	West	82853	$400.00	January
7	Brennan, Michael	West	72949	$850.00	January
8	Brennan, Michael	West	90044	$1,500.00	January
9	Brennan, Michael	West	82853	$550.00	February
10	Brennan, Michael	West	72949	$400.00	March
11	Davis, William	South	55223	$235.00	February
12	Davis, William	South	10354	$850.00	January
13	Davis, William	South	50192	$600.00	March
14	Davis, William	South	27589	$250.00	January
15	Dumlao, Richard	West	67275	$400.00	January



Ambiti di applicazione

The sexy job in the next 10 years will be statisticians.

People think I'm joking, but who would've guessed that computer engineers would've been the sexy job of the 1990s?

Hal Varian, chief economist at Google

Il **Data Scientist**
Moderno

MATH & STATISTICS

- Machine learning
- Statistical modeling
- Experiment design
- Bayesian inference
- Supervised learning: decision trees, random forests, logistic regression
- Unsupervised learning: clustering, dimensionality reduction
- Optimization: gradient descent and variants

DOMAIN KNOWLEDGE & SOFT SKILLS

- Passionate about the business
- Curious about data
- Influence without authority
- Hacker mindset
- Problem solver
- Strategic, proactive, creative, innovative and collaborative

PROGRAMMING & DATABASE

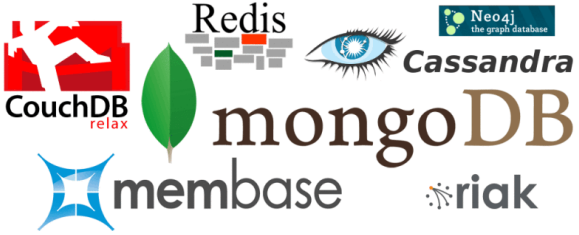
- Computer science fundamentals
- Scripting language e.g. Python
- Statistical computing packages, e.g., R
- Databases: SQL and NoSQL
- Relational algebra
- Parallel databases and parallel query processing
- MapReduce concepts
- Hadoop and Hive/Pig
- Custom reducers
- Experience with xaaS like AWS

COMMUNICATION & VISUALIZATION

- Able to engage with senior management
- Story telling skills
- Translate data-driven insights into decisions and actions
- Visual art design
- R packages like ggplot or lattice
- Knowledge of any of visualization tools e.g. Flare, D3.js, Tableau

Data Science workflow

Un mondo di strumenti



R for Data Science

Cos'è

R

free software
social
easy

powerful
visualization tool

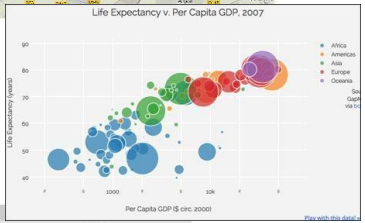
based on
packages

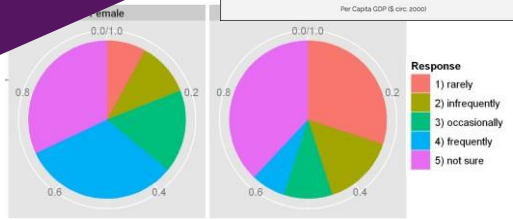
statistical
focus

RStudio IDE

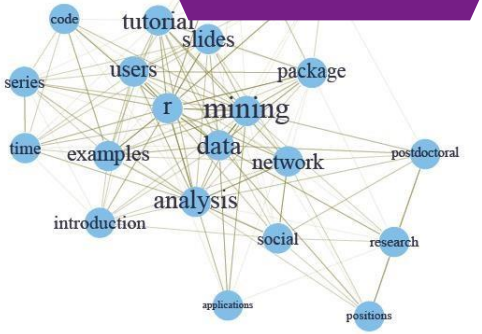
Alcuni esempi #R

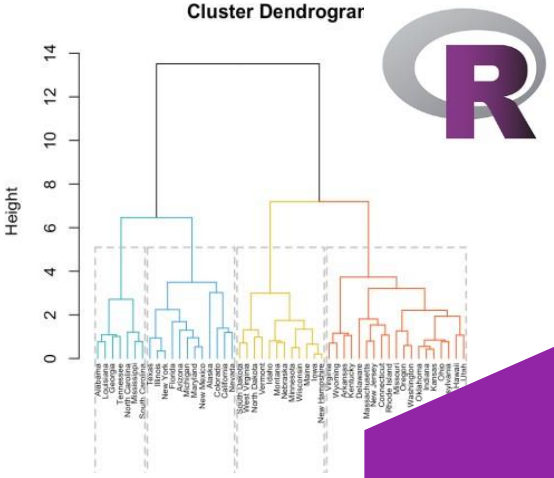
Visualization



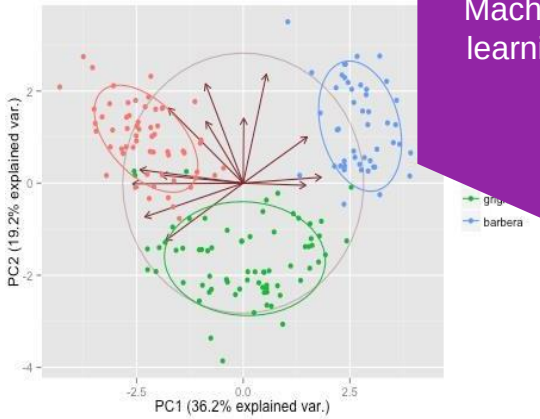


Text mining

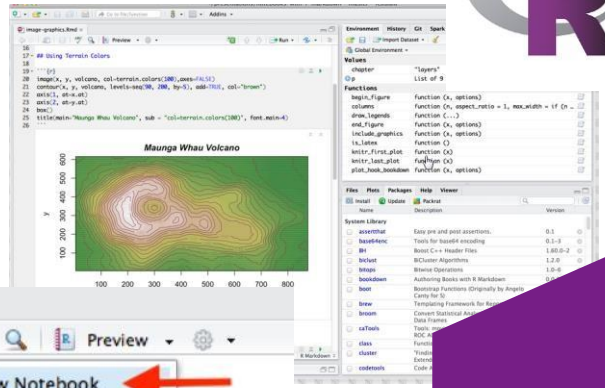


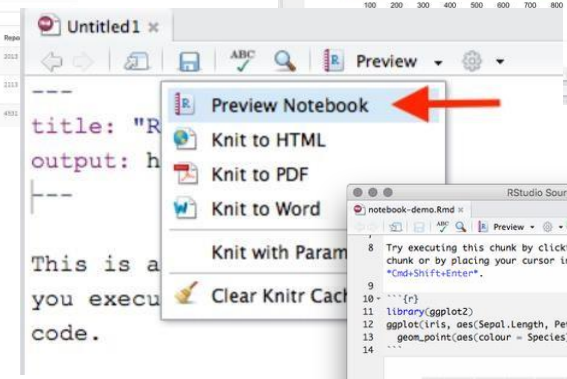


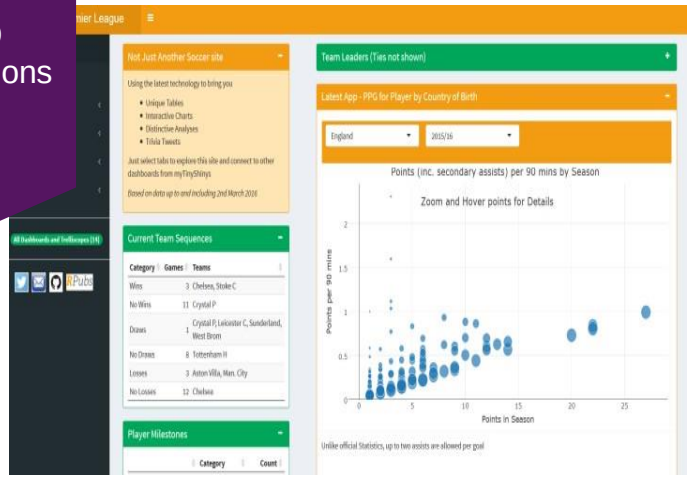
Machine learning

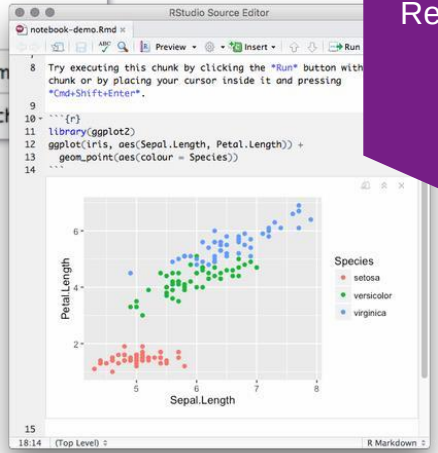


Alcuni esempi #R



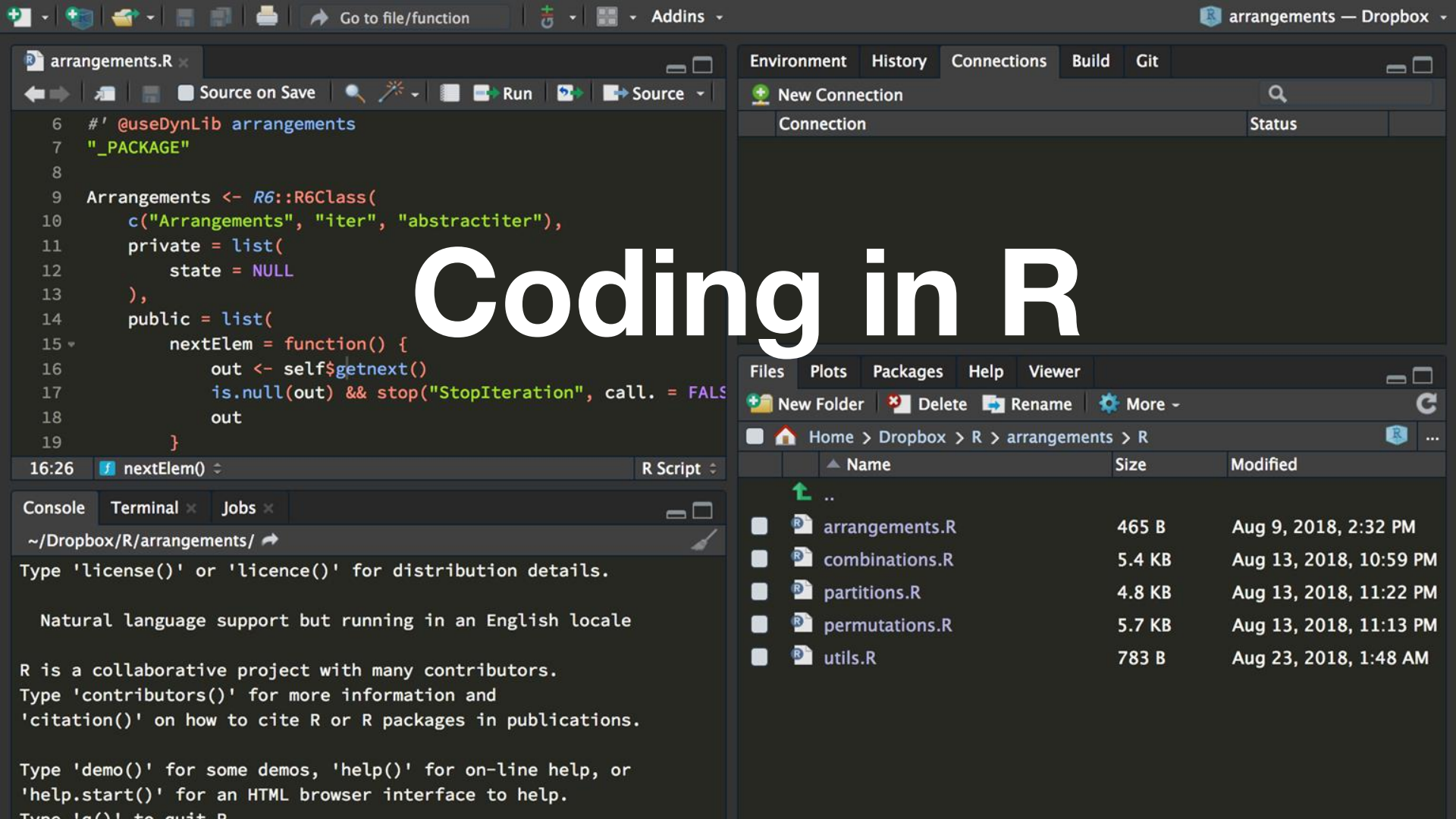




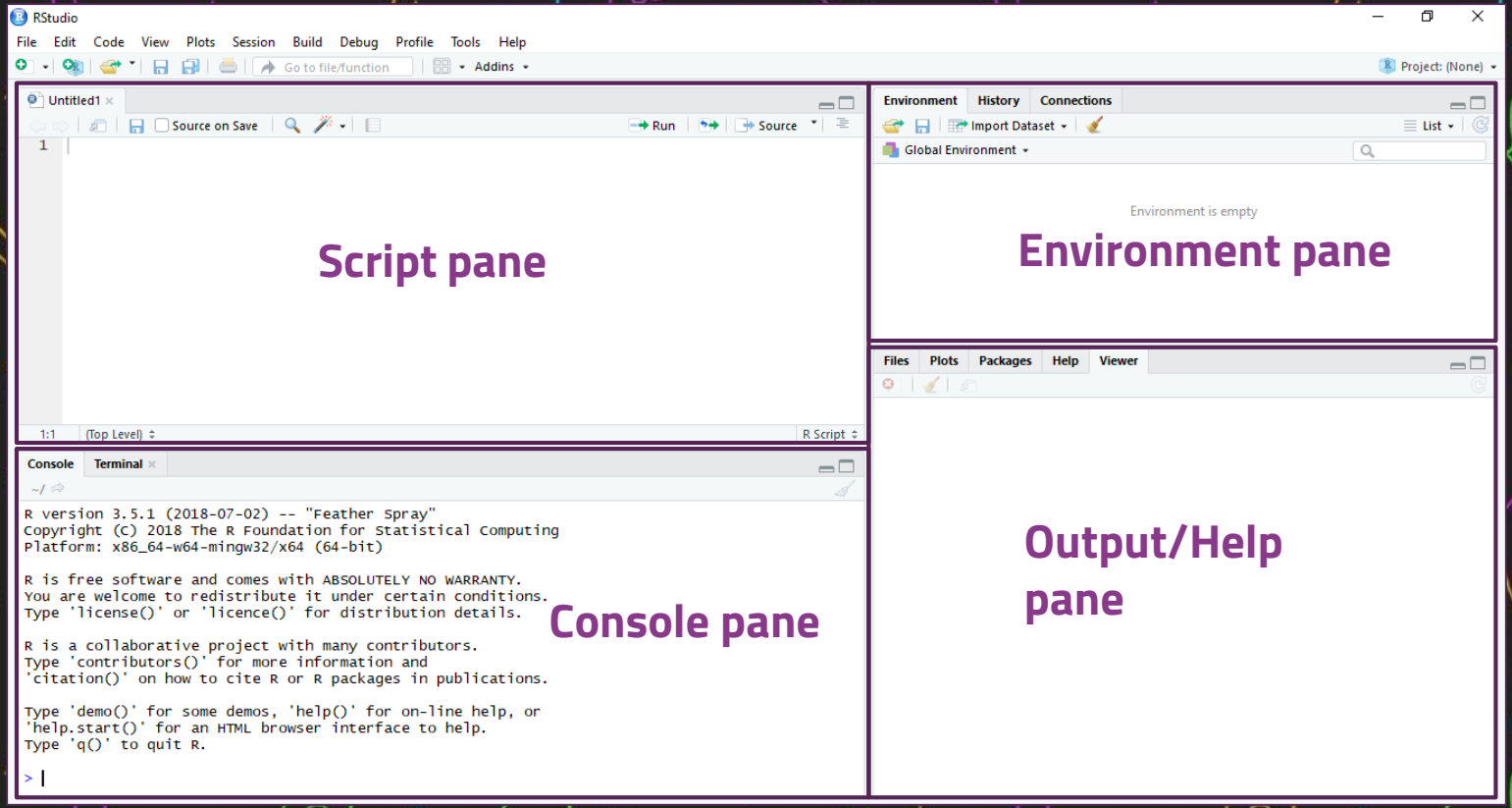


Web applications

Reporting


Go to file/function
Addins
arrangements — Dropbox
arrangements.R
Source on Save
Run
Source
#' @useDynLib arrangements
"_PACKAGE"
Arrangements <- R6::R6Class(
c("Arrangements", "iter", "abstractiter"),
private = list(
state = NULL
),
public = list(
nextElem = function() {
out <- self$getnext()
is.null(out) && stop("StopIteration", call. = FALS
out
}
16:26
nextElem()
R Script
Console
Terminal
Jobs
~/Dropbox/R/arrangements/
Type 'license()' or 'licence()' for distribution details.
Natural language support but running in an English locale
R is a collaborative project with many contributors.
Type 'contributors()' for more information and
'citation()' on how to cite R or R packages in publications.
Type 'demo()' for some demos, 'help()' for on-line help, or
'help.start()' for an HTML browser interface to help.
Environment
History
Connections
Build
Git
New Connection
Connection
Status
Coding in R
Files
Plots
Packages
Help
Viewer
New Folder
Delete
Rename
More
Home > Dropbox > R > arrangements > R
Name
Size
Modified
..
arrangements.R 465 B Aug 9, 2018, 2:32 PM
combinations.R 5.4 KB Aug 13, 2018, 10:59 PM
partitions.R 4.8 KB Aug 13, 2018, 11:22 PM
permutations.R 5.7 KB Aug 13, 2018, 11:13 PM
utils.R 783 B Aug 23, 2018, 1:48 AM

What RStudio IDE offers



Cosa faremo?

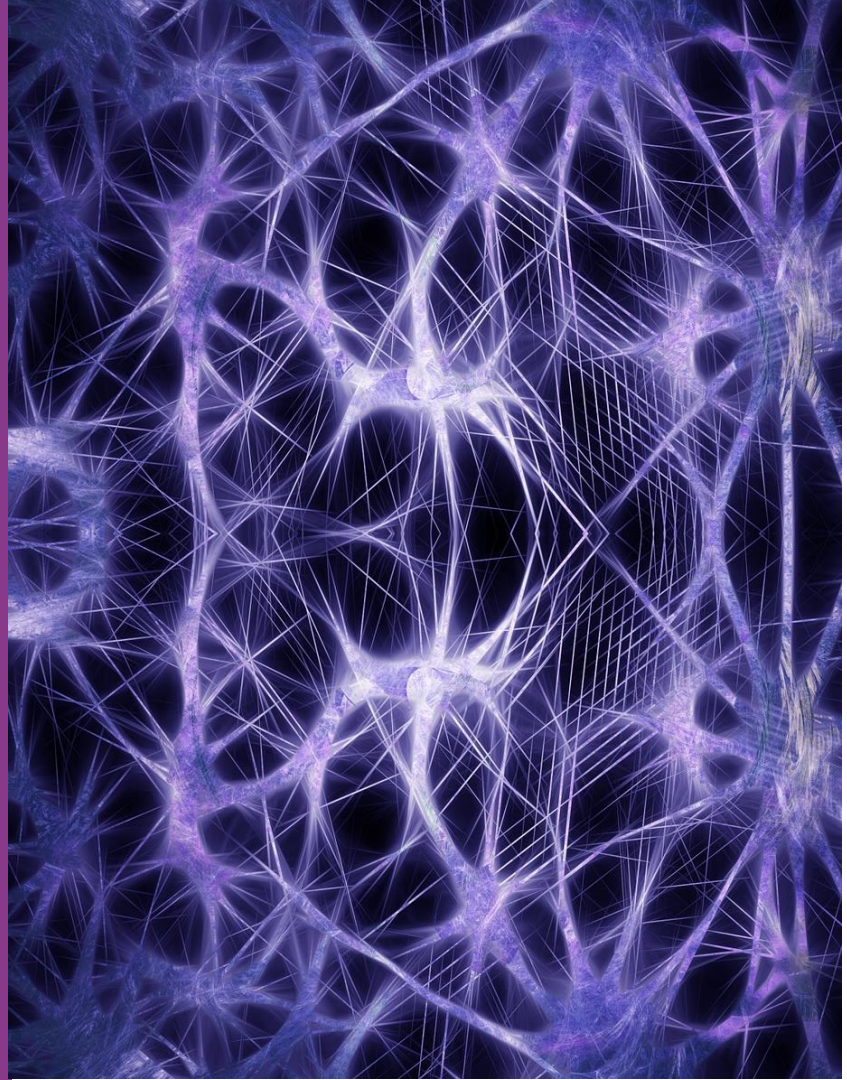
- WordCloud
- Network dei termini

WordCloud

letteralmente
“nuvola di parole”

rappresentazione grafica delle **parole più frequenti** in un testo

dimensioni e **frequenza** delle parole sono direttamente proporzionali



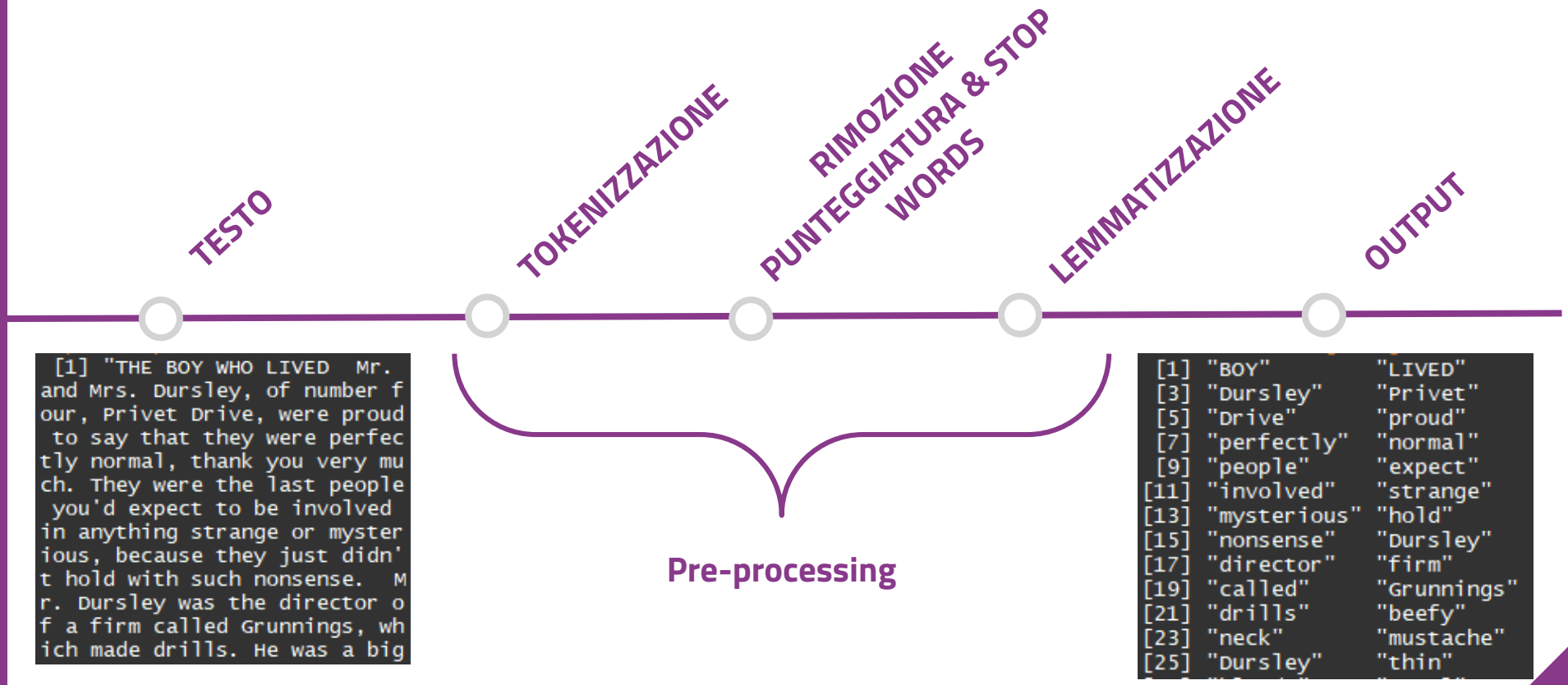
Network di termini

rappresentazione grafica delle **relazioni tra i termini**

dimensioni del link e **frequenza** delle relazioni sono direttamente proporzionali

permette di evidenziare relazioni tra **gruppi di parole**

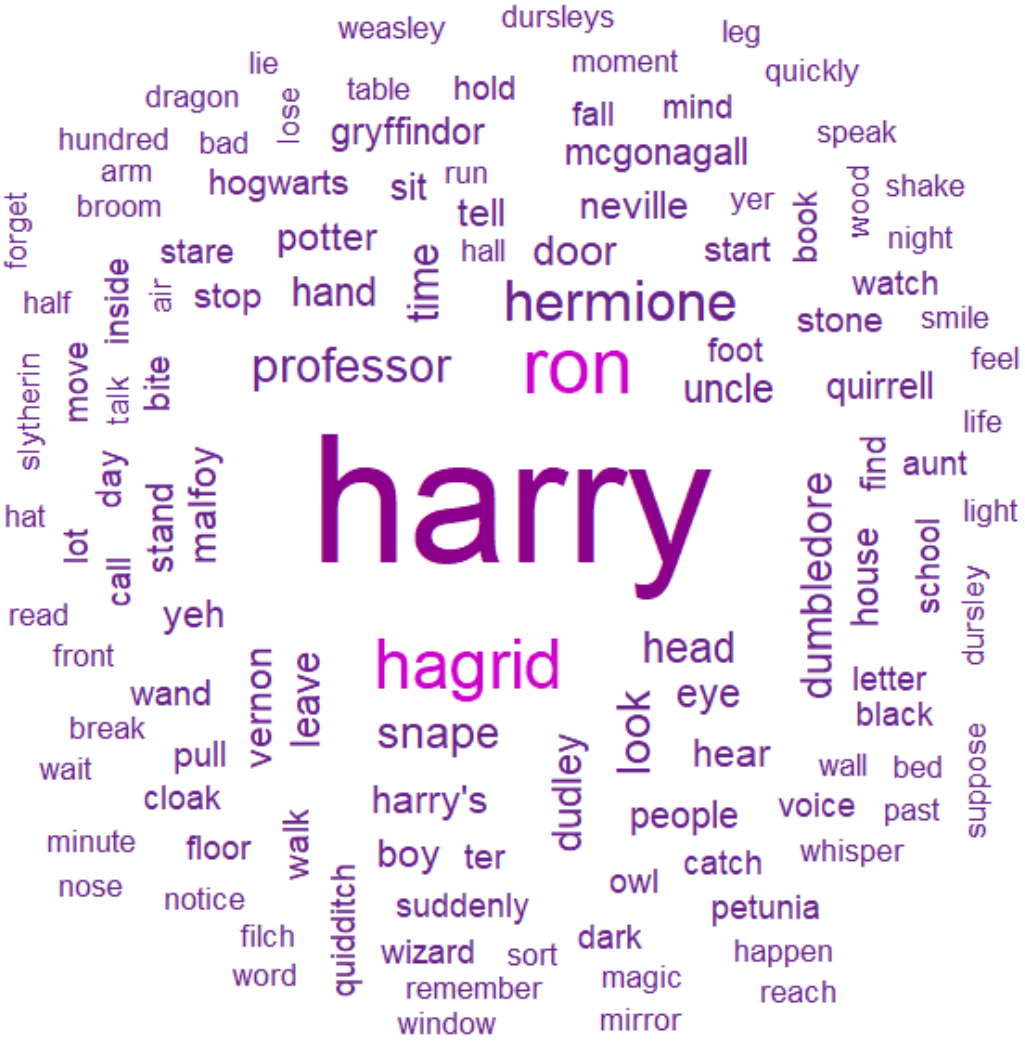
Preparazione del testo



WordCloud

OUTPUT

TABELLA DI FREQUENZE

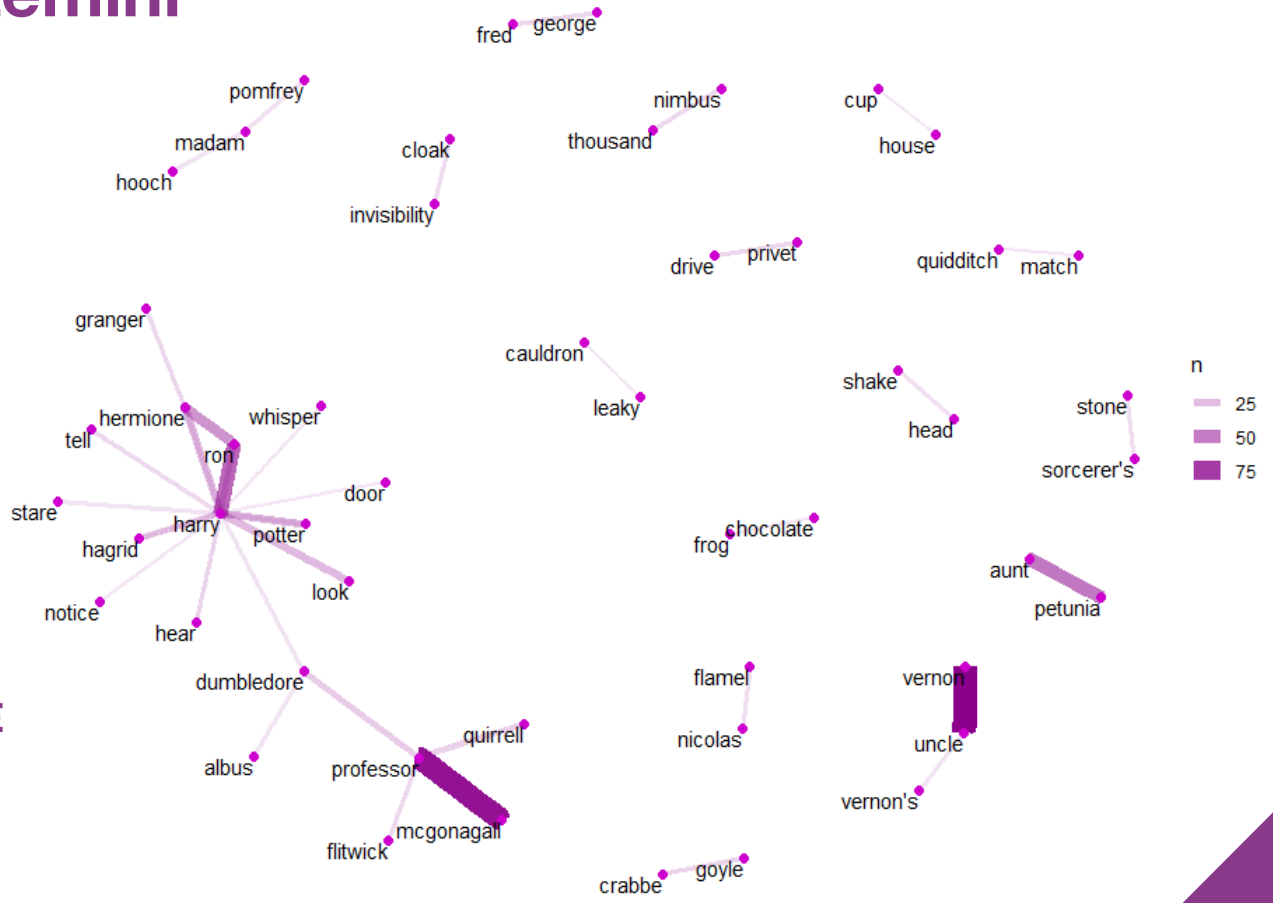


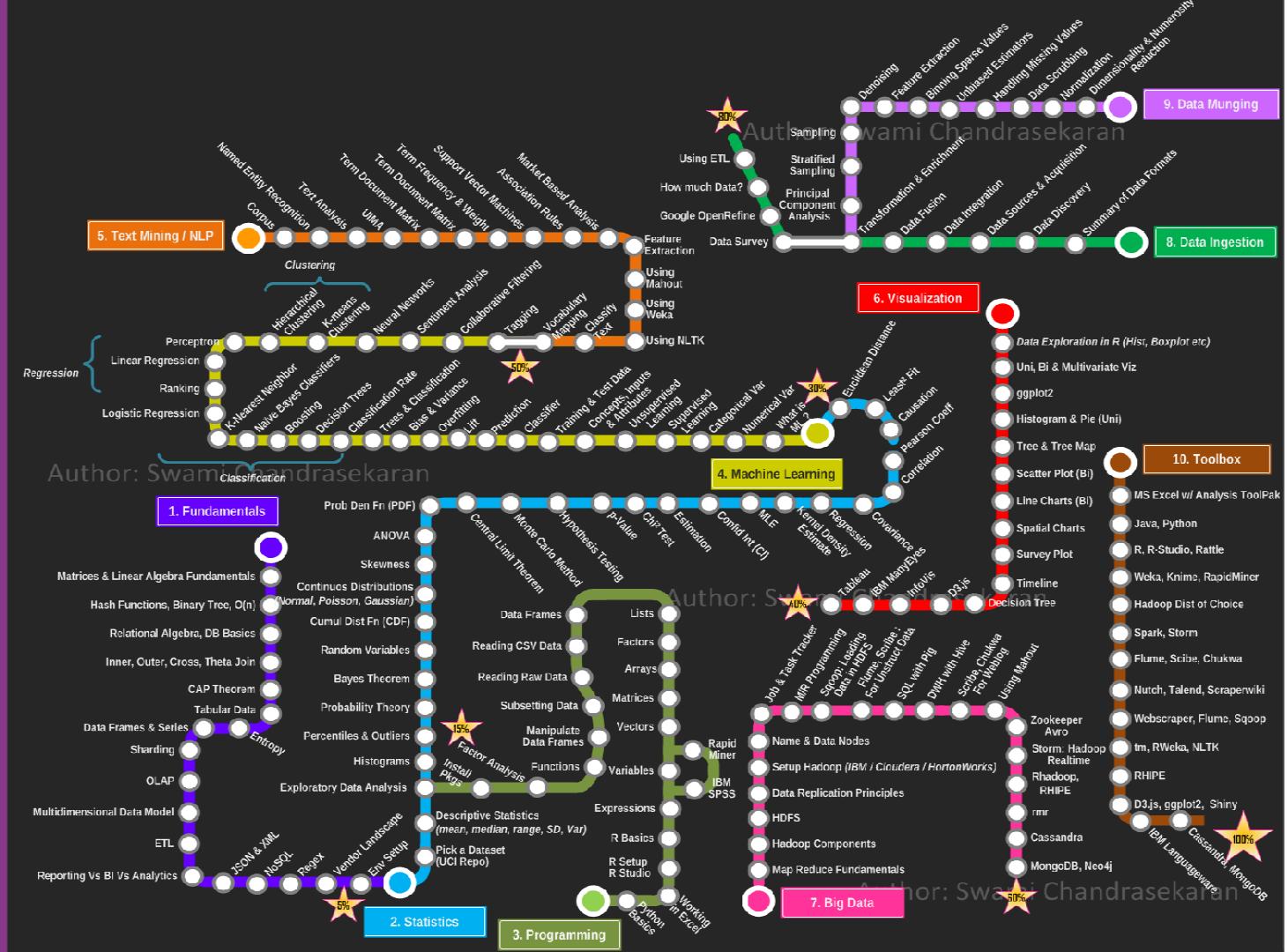
Network dei temini

OUTPUT

CREAZIONE BIGRAMMI

TABELLA DI FREQUENZE





Be ready for the journey!

Good Luck!