

00 - intro

PRO1036 - Analyse de données scientifiques en R

Tim Bollé

September 8, 2025

Présentations

Timothy Bollé

Originaire de France

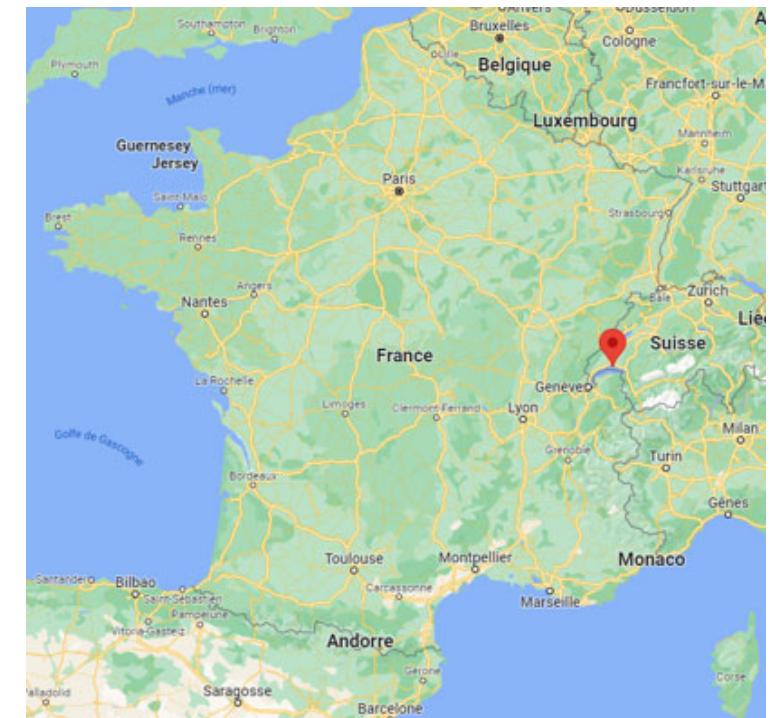
En 2011:

- Départ pour Lausanne
- École des Sciences criminelles

Bachelor en science forensique

Master en science forensique

- Spécialisé en traces numérique



Lausanne

Timothy Bollé

Doctorat en science forensique:

- Détection et analyse de liens non-évidents dans les fraudes en ligne

École des Sciences Criminelles:

- Enseignement dans le domaine du numérique
- Expertises
- Formation professionnelle

Depuis 2022: Professeur à l'UQTR

Et vous ?



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Objectifs

Science des données

Domaine qui vise à transformer des données brutes en connaissances ou en décisions

Le faire de manière scientifique

Ce cours vise à vous donner une méthode pour exploiter des données !

FAQ

Q - Quelles connaissances préalables ?

A - Aucunes - on part de la base !

Q - Est-ce que c'est un cours de statistique ?

A - Non mais nous allons beaucoup les utiliser.

Q - Est-ce que c'est un cours de programmation ?

A - Non... mais nous allons en faire beaucoup !

Comment

Comment feriez vous pour analyser des données ?

The screenshot shows an Excel spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L
1	Column1	rqid	country	country_code	vote	session	importantvote	date	unres	amend	para	short
2	1	6	United States	US	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
3	2	6	Canada	CA	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
4	3	6	Cuba	CU	yes	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
5	4	6	Dominican Republic	DO	abstain	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
6	5	6	Mexico	MX	yes	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
7	6	6	Guatemala	GT	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
8	7	6	Honduras	HN	yes	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
9	8	6	El Salvador	SV	abstain	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
10	9	6	Nicaragua	NI	yes	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
11	10	6	Panama	PA	abstain	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
12	11	6	Colombia	CO	abstain	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
13	12	6	Venezuela	VE	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
14	13	6	Ecuador	EC	yes	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
15	14	6	Peru	PE	yes	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
16	15	6	Brazil	BR	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
17	16	6	Bolivia	BO	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
18	17	6	Paraguay	PY	abstain	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
19	18	6	Chile	CL	yes	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
20	19	6	Argentina	AR	abstain	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
21	20	6	Uruguay	UY	yes	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
22	21	6	United Kingdom	GB	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
23	22	6	Netherlands	NL	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
24	23	6	Belgium	BE	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
25	24	6	Luxembourg	LU	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
26	25	6	France	FR	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
27	26	6	Poland	PL	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
28	27	6	Czechoslovakia	CS	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
29	28	6	Yugoslavia	YU	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
30	29	6	Greece	GR	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
31	30	6	Russia	RU	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
32	31	6	Ukraine	UA	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS
33	32	6	Belarus	BY	no	1	0	04.01.1946 R/1/107		0	0	DECLARATION OF HUMAN RIGHTS

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Comment

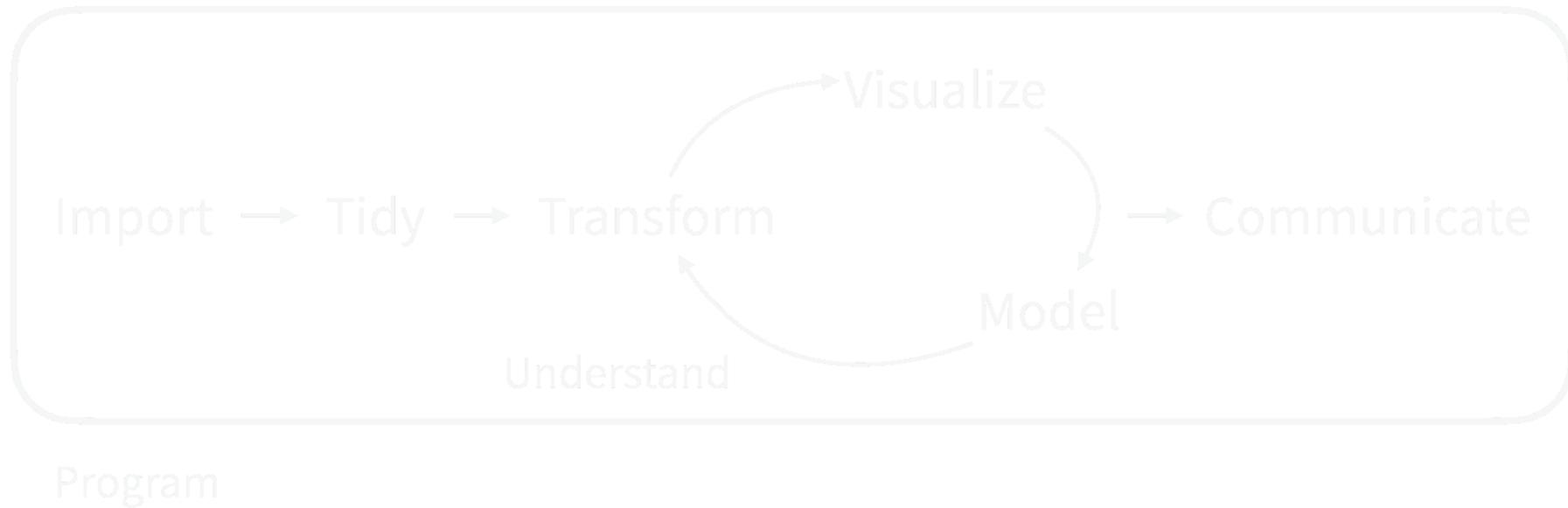
The screenshot shows the RStudio interface with the following components:

- Data View:** Displays the "unvotes" dataset as a data frame. The columns include rcid, country, country_code, vote, session, importantvote, date, unres, amend, para, and short. The data shows 15 rows of voting records from 1946.
- Environment View:** Shows the global environment with the "unvotes" dataset defined.
- Files View:** Shows the project structure: Home > Projets > PRO1036 > slides > 00 - Intro. It lists a file "00 - intro.qmd" (2.2 KB, modified Sep 8, 2024, 11:18 PM) and a folder "figs".
- Terminal View:** Shows an R session running on R 4.4.1. The command "View(unvotes)" has been entered, and the output shows the first 15 rows of the "unvotes" dataset.

RStudio

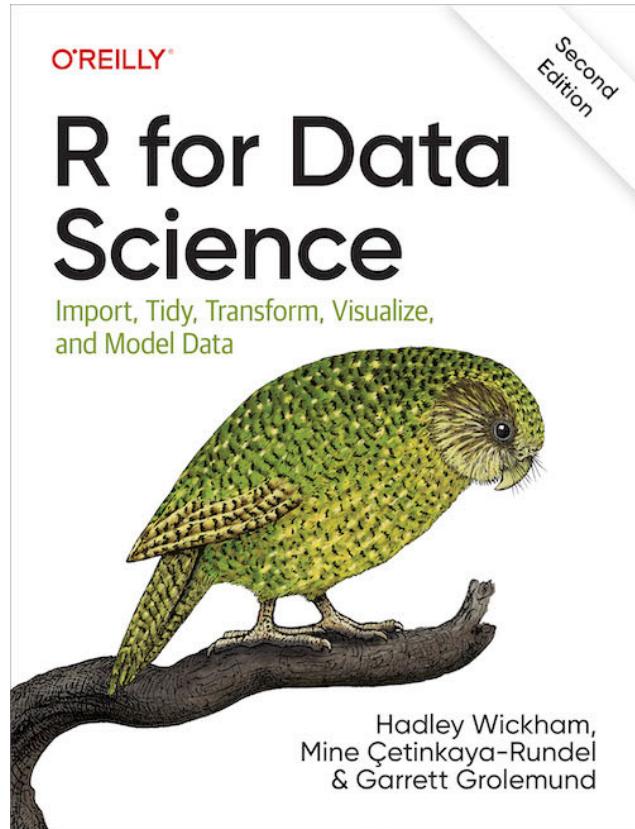
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Méthode



(Wickham et al., 2023)

Référence



Wickham, H., Çetinkaya-Rundel, M. and Grolemund, G. (2023). *R for Data Science* (2nd ed.). O'Reilly Media, Inc.