

Dataviz: A package of domain specific visualizations and languages for the Pharo live coding environment

Offray Vladimir Luna Cárdenas^{1,2,3}

DOI: [10.21105/joss.00238](https://doi.org/10.21105/joss.00238)

1 HackBo: a hackerspace in Bogotá 2 mutabiT 3 University of Caldas

Software

- [Review](#) ↗
- [Repository](#) ↗
- [Archive](#) ↗

Submitted: 07 April 2017

Published: 15 January 2018

Licence

Authors of JOSS papers retain copyright and release the work under a Creative Commons Attribution 4.0 International License ([CC-BY](#)).

Summary

Dataviz is a companion package for Grafoscopio (Luna Cárdenas 2014) that puts together several examples of Domain Specific Visualizations and Domain Specific Languages (DSV, DSL, respectively) developed with the Roassal agile visualization engine (Bergel 2016) in the fields of data activism (Milan and Gutiérrez 2015), civic hacking (Schrock 2016). Dataviz is the result of a PhD in Design & Creation, which is informed by the technique of observant participation (Moeran 2007) and tries a critical approach to inhabit and foster communities and to provide them with some tools and prototypes for their usual endeavors. Included prototypes approach several themes like: Panama Papers as reproducible Research (Luna Cárdenas 2016b), Twitter data selfies (Luna Cárdenas 2016c) and published medicine access (Luna Cárdenas 2016a) and are presented via blog post and internal interactive documentation via Grafoscopio notebooks. Dataviz is part of a set of “pocket infrastructures” which are arrangements of tools which are characterized for being: simple, self contained, and working fine on-line and off-line and run in a wide spectrum of hardware, from USB drives to modest laptops and beyond (and in between), which contrast sharply with the exclusionary discourse, infrastructure and practice of “Big Data” and the classical idea of predicting the future by hyping only a part of it. Using such pocket infrastructures (like Dataviz, Grafoscopio and Fossil), researchers propose a way to put in “everybody’s pockets” the tools for being a data/digital citizen, instead in only the places with “deep pockets” (money, resources, big data centers, gigantic data bases & data sets and so on), and some prototypes, like the one the Panama Papers, are showing that is possible to have a more inclusive approach, to problems that has been approached only from the Big Data perspective. This also means an alternative way of dealing with data. Instead of being the data threshing machine that tries to process everything, pocket infrastructures try to “build the magnet to find the needle in the haystack”, focusing on frictionless interconnected data (Pollock 2013) and zooming out from there. The classes in the package and their documentation show several levels of maturity from pretty mature (Panama Papers) to early coder practices (Infomed) and are offered as examples and excersises for data activist and related practitioners (in journalism, research a other fields) practical examples of how pocket infrastructures could be provided for such fields and are used in our recurrent Data Week workshop+hackathon, for code testing and refactoring, while

References

Bergel, Alexandre. 2016. *Agile Visualization*. LULU Press. <http://agilevisualization.com/>.

Luna Cárdenas, Offray Vladimir. 2014. “Metáforas Y Artefactos Alternativos de Escritura Para Jalonar La Investigación Abierta Y La Ciencia Ciudadana Y de Garage,”

- September. <http://mutabit.com/repos.fossil/grafoscopio/doc/tip/Docs/Es/Articulos/Libertadores/bootstrapping-objeto-investigacion.pdf>.
- . 2016a. “Domain Specific Visualizations: A Glimpse of Medicine Public Data Released by Governments.” <http://mutabit.com/offray/blog/en/entry/sdv-infomed>.
- . 2016b. “Panama Papers: A Case for Reproducible Research, Data Activism and Frictionless Data.” <http://mutabit.com/offray/blog/en/entry/panama-papers-1>.
- . 2016c. “Twitter Data Selfies: From Paper Mockup to Digital Prototype.” <http://mutabit.com/offray/blog/en/entry/ds-twitter-mockup>.
- Milan, Stefania, and Miren Gutiérrez. 2015. “Medios Ciudadanos Y Big Data: La Emergencia Del Activismo de Datos.” *MEDIACIONES* 11 (14):10. <https://doi.org/10.26620/uniminuto.mediaciones.11.14.2015.10-26>.
- Moeran, Brian. 2007. “From Participant Observation to Observant Participation: Anthropology, Fieldwork and Organizational Ethnography.”
- Pollock, Rufus. 2013. “Frictionless Data: Making It Radically Easier to Get Stuff Done with Data.” *Open Knowledge International Blog*. <https://blog.okfn.org/2013/04/24/frictionless-data-making-it-radically-easier-to-get-stuff-done-with-data/>.
- Schrock, Andrew R. 2016. “Civic Hacking as Data Activism and Advocacy: A History from Publicity to Open Government Data.” *New Media & Society* 18 (4):581–99. <https://doi.org/10.1177/1461444816629469>.