

The psyplot interactive visualization framework

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Software

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Summary

psyplot (Sommer 2017e) is an cross-platform open source python project that mainly combines the plotting utilities of matplotlib (Hunter 2007) and the data management of the xarray (Hoyer and Hamman 2017) package and integrates them into a software that can be used via command-line and via a GUI.

The main purpose is to have a framework that allows a fast, attractive, flexible, easily applicable, easily reproducible and especially an interactive visualization of data.

The ultimate goal is to help scientists in their daily work by providing a flexible visualization tool that can be enhanced by their own visualization scripts.

The framework is extended by multiple plugins: psy-simple (Sommer 2017d) for simple visualization tasks, psy-maps (Sommer 2017b) for georeferenced data visualization and psy-reg (Sommer 2017c) for the visualization of fits. It is furthermore extended by the optional graphical user interface psyplot-gui (Sommer 2017a).

References

- Hoyer, S., and J. Hamman. 2017. “Xarray: N-D Labeled Arrays and Datasets in Python.” *Journal of Open Research Software* 5 (1). Ubiquity Press. doi:10.5334/jors.148.
- Hunter, J. D. 2007. “Matplotlib: A 2d Graphics Environment.” *Computing in Science Engineering* 9 (3): 90–95. doi:10.1109/MCSE.2007.55.
- Sommer, Philipp S. 2017a. “Graphical User Interface for the Psyplot Package.” <https://github.com/Chilipp/psyplot-gui>.
- . 2017b. “Psy-Maps: The Psyplot Plugin for Visualizations on a Map.” <https://github.com/Chilipp/psy-maps>.
- . 2017c. “Psy-Reg: Psyplot Plugin for Visualizing and Calculating Regression Plot.” <https://github.com/Chilipp/psy-reg>.
- . 2017d. “Psy-Simple: The Psyplot Plugin for Simple Visualizations.” <https://github.com/Chilipp/psy-simple>.
- . 2017e. “The Psyplot Interactive Visualization Framework.” <https://github.com/Chilipp/psyplot>.