Policy Relevant Visualization and Analysis of LDS Data with Open Source Tools

Jared Knowles, Policy Research Advisor

Wisconsin Department of Public Instruction

• jared.knowles@dpi.wi.gov • http://github.com/jknowles/ • February 13, 2012

Open Source Tools

- **R** (http://cran.r-project.org/)
  - An open source statistics package that is freely available for all platforms.
- **RStudio** (http://www.rstudio.org/)
  - An enhanced front-end for R. An Integrated Development Environment (IDE) for statistical programming.
- **Quantum GIS** (http://www.qgis.org/)
  - A GIS package that provides most of the functionality of ArcGIS but is freely available.
- **LaTeX** (http://www.latex-project.org/)
  - A typesetting and document building tool that integrates with R.
- **git** (http://git-scm.com/)
  - A version control system for collaborative coding that works with R.

Tutorials and Help Getting Started

- R Reference (http://www.statmethods.net/)
- First R Commands to Learn (https://github.com/hadley/devtools/wiki/vocabulary)
- Beginning with LaTeX (http://en.wikibooks.org/wiki/LaTeX)
- Quantum GIS Guide (http://qgis.org/en/documentation/manuals.html)
- R Graph Gallery (http://addictedtor.free.fr/graphiques/)

Collaboration on LDS_TOOLS

- LDS_TOOLS Package for R (https://github.com/jknowles/LDS_TOOLS)
  - A project for R that seeks to make it easier for administrators at state and local education agencies to analyze and visualize their data on student, school, and district performance.
  - The project is open source and available for anyone to contribute to, modify, download, copy, and/or share.
  - Interested folks with programming skills especially at the SEA, districts, or RELs should visit get involved.
  - Currently it comes with simulated achievement data to allow commands to be tested on data that closely resembles administrative records common across state and district data systems.
  - GitHub will be used to coordinate these efforts.

You can download this handout, the presentation slides, all images from the presentation and more at the GitHub repository for this presentation: https://github.com/jknowles/mis-presentation. Just click "Download ZIP".