

DIY Data Viz Tools: A Quick Guide



All of the tools below offer a no-cost option with some or many restrictions, a low-cost option with fewer restrictions, and two or three additional tiered paid plans. "Low-cost" is defined as less than \$500/yr.

Good Bets

1. Copy, paste, presto: These tools are quick and easy, though options are somewhat limited.

- [Atlas](http://www.theatlas.com) <http://www.theatlas.com>
- [Datawrapper](http://www.datawrapper.de) <http://www.datawrapper.de>
- [Charted](http://www.charted.co) <http://www.charted.co>

2. Spreadsheet love: Tools that will be comfortable and familiar to Excel users.

- [Excel Web App](http://en.support.wordpress.com/excel-web-app/) <http://en.support.wordpress.com/excel-web-app/>
- [Google App](http://support.google.com/docs/answer/78052?hl=en) <http://support.google.com/docs/answer/78052?hl=en>
- [Highcharts Cloud](http://cloud.highcharts.com) <http://cloud.highcharts.com>

3. Share the love: Tools that produce visualizations that yearn to be shared.

- [Infogr.am](http://infogr.am) <http://infogr.am>
- [Silk](http://www.silk.co) <http://www.silk.co> [no longer supported as of 8/2016]

4. Show, don't tell: Tools that convey data stories through robust interactivity and visual exploration.

- [Plot.ly](http://plot.ly/feed/) <http://plot.ly/feed/>
- [Tableau Public](http://public.tableau.com/en-us/s/) <http://public.tableau.com/en-us/s/>

5. Show and tell: Tools for creating infographics, social media graphics and slide decks.

- [Canva](http://www.canva.com) <http://www.canva.com>
- [Easel.ly](http://www.easel.ly/) <http://www.easel.ly/>
- [Piktochart](http://piktochart.com/) <http://piktochart.com/>
- [Haiku Deck](http://www.haikudeck.com/) <http://www.haikudeck.com/>

Viz Platform Pricing Plans

Low-cost/no-cost tools use freemium pricing plans, offering additional features, functionality and support for each successive price plan. Higher-tiered and enterprise plans are not shown.

Platform	Plan Options	Cost
Tableau**	Tableau Public	Free
	Tableau Desktop PE	Free academic accounts
Infogram**	Personal	Free
	Pro	19 /m
	Business - single user	\$67 /m
Atlas	No pricing plans	Free
DataWrapper	Personal	\$0 - \$25 - \$33 /m
	Team	\$171 - \$370 /m
	Enterprise	\$662 /m
Charted	No pricing plans	Free
Plot.ly*	Community	Free
	Professional	\$33 /m
Highcharts Cloud	Personal	Free
	Standard	\$15 /m
	Advanced	\$30 /m
WP Visualizer	Free plug-in: No cost but may include web	Free
	Paid plug-in: May include web hosting costs	\$74.99 /forever
Google Drive	Personal (small fees for more storage)	Free
	Business	\$5 - \$10 per user /m
Excel App	No cost but requires Excel and OneDrive	Free

pricing plans, con't.

Platform	Plan Options	Cost
PiktoChart**	Personal	Free
	Pro	\$3.30 /m
Easel.ly**	Personal or Group	Free
	Pro	\$3 /m
Silk	No cost but no longer supported	Free
Haiku*	Public (limit of 3 presentations)	Free
	Pro	\$10 /m
	Premium	\$30 /m
	Bulk (5 or more users)	\$499 /yr

*academic discounts available

**academic and nonprofit discounts avail

Notes

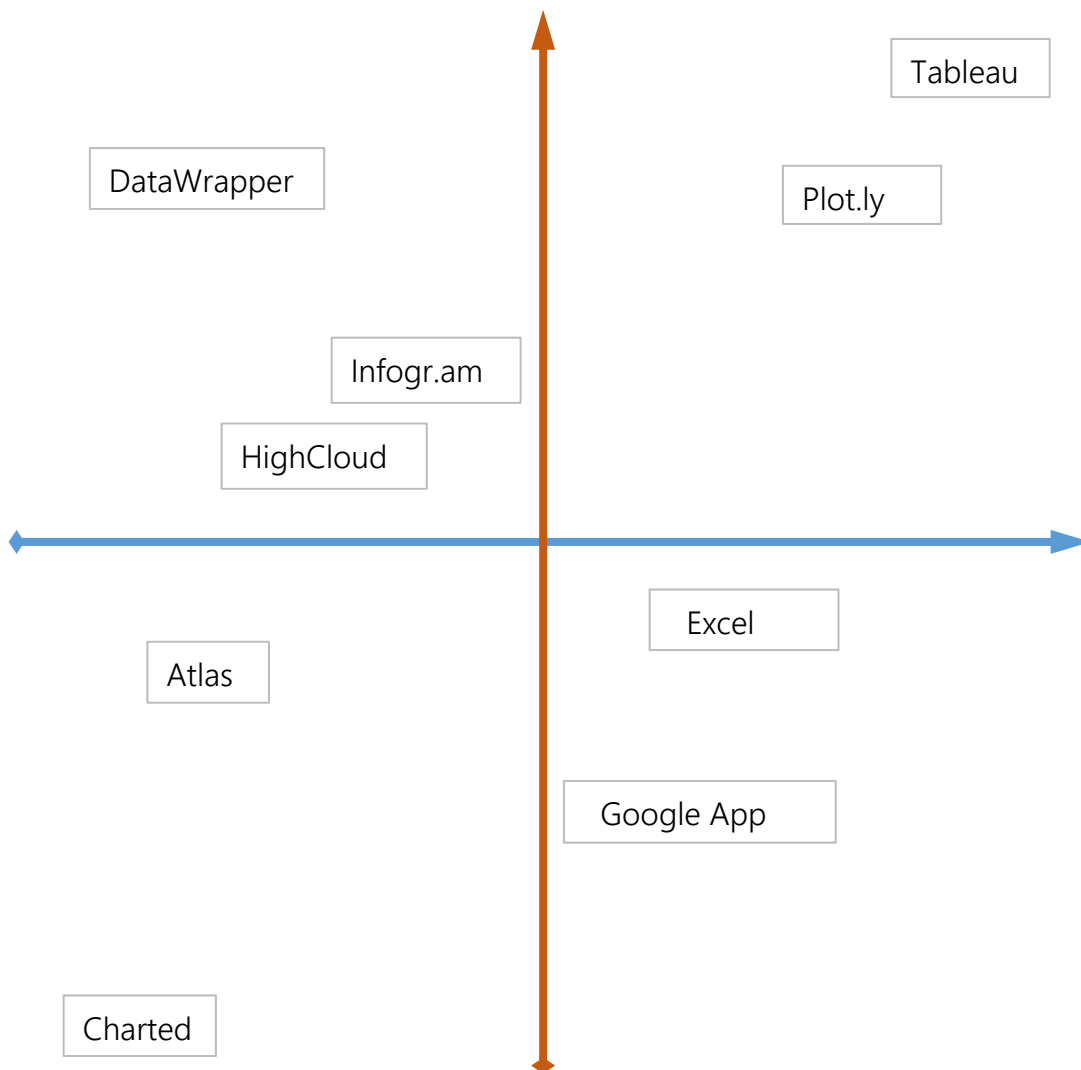
- In most cases, the prices listed are monthly fees based on an annual payment. Paying monthly is usually possible but may include a surcharge of up to 25%.
- All paid platforms have an Enterprise version available with maximum flexibility, storage and support. Some Enterprise versions include private server capacity, HIPAA compliance, or CMS integration. Annual costs for Enterprise accounts start at \$8,000 - \$10,000 and increase according to the number of users. The exception is Plot.ly, who has two Enterprise versions at ~\$1,000 and \$2,000.
- In some cases, the academic discount is available for a student version of the platform.

Which tool to use when?

1. Quick cost-benefit analysis

Where cost = time spent learning how to use the tool and, thereafter, time-to-deployment.

Viz Platform **Functionality** vs. **Learning Curve**



2. Attribute analysis

Prioritize what you need from the tool, and let its strengths and limitations guide you.

Attribute	Description
Ease of use	
Data transfer method	Options include: <ul style="list-style-type: none"> • Importing the data to the platform • Linking to the data in Google Drive or DropBox • Copying and pasting the data from Excel or a csv file
Design interface	Might range from intuitive to clumsy or too complicated
Tutorials, help & support	
Good bets	Atlas, Charted, Datawrapper
Functionality	
Customizability	
Design options	More choices are better regarding: <ul style="list-style-type: none"> • Format and styling options (e.g. fonts, borders, shading, etc.) • Color palettes • Layout options (e.g. blog posts; full page; and downloadable pdfs) • Storytelling options (icons, images, rich text, etc.)
Chart templates and themes	Templates can be an efficient starting point for data visualizations <ul style="list-style-type: none"> • The platform may include table, chart, and map templates • Low cost/no cost platforms range from 2 chart types to 30+ • Infographic tools offer themes with predefined fonts, palettes, etc.
Good bets	Tableau Public, Infogr.am, Plot.ly
Data Analysis	
Data prep	Most platforms require that data prep/cleaning occurs prior to use
Data analysis	Data management and analysis options might include: <ul style="list-style-type: none"> • Aggregation, summation, automatic rate calculations • Formulas, transformations, ad hoc analyses • Time series, trend analyses, forecasting
Good bets	Tableau Public, Plot.ly, Highcharts Cloud

viz tool attributes, con't.

Interactivity/Sensemaking	
Data exploration	<p>Sensemaking is fostered through:</p> <ul style="list-style-type: none"> • Tooltips-upon-hover that provide details on demand • Highlighting, filters and actions that permit "slicing and dicing" • Viewing the underlying data
Localization and view customization	<p>Engagement results when the viz caters to multiple stakeholder groups:</p> <ul style="list-style-type: none"> • Ideally, views can be customized according to organizational/ program level, and target population/subpopulation characteristics • By combining interactive features, the same data can provide different levels of information to different types of stakeholders such as funders, local officials, citizen activists, project staff • Locally mapping the data fosters recognition, interest, ownership
Good bets	Tableau Public, Infogr.am, Datawrapper

Sharing Options

Collaboration	
Team-based design	Some tools allow multiple users to collaborate throughout the design process, track changes, message others, etc.
Sharing	
Engagement and action	<p>Data viz can spur dialogue, advocacy and action when the user can:</p> <ul style="list-style-type: none"> • Download the viz as a PDF or image • Share the viz through a link or through social media • Embed the viz in a web page • Download the underlying data for further analysis and use
Good bets	Infogr.am, Highcharts Cloud, Tableau Public; Plot.ly for collaboration

Privacy & Security

Protection of PII	<ul style="list-style-type: none"> • Low-cost/no-cost tools do not adequately protect private data
Good bets	Enterprise accounts, some of which offer HIPAA compliance

viz tool attributes, con't.

Look and feel	
Satisfying to view and use	Subjective! but may include: <ul style="list-style-type: none"> • Animation effects • Intuitive navigation, filters, etc. • Responsive design • Customized logo and branding, integration with existing website
Good bets	Datawrapper, Infogr.am, Tableau Public
Sustainability	
Maintenance	Slim budgets require low maintenance and consistent performance <ul style="list-style-type: none"> • Browser compatibility and reliability • Stability i.e. the viz retains consistent look and feel • Efficient strategies for updating or refreshing data • Straightforward editing of layout and text
Cost	<ul style="list-style-type: none"> • No cost plans = ↓ options, ↓ support and require data aggregation • Low cost plans = ↑ customizability but still require data aggregation
Good bets	Tableau, Datawrapper, Atlas

3. Activity Analysis

Start with the purpose of the data communication and the intended audience, and let the storytelling strategy guide you.

Context		Story		
Activity	Audience	Communications Strategy	Storytelling Technique	Tool(s)
Advocacy	General public	PDF	One-off data viz →	Charted, Atlas, Datawrapper
Policy campaign	Team	Email list	Interactive report →	Tableau, Infogr.am, Plot.ly
Narrative	Leadership/mngt	Web post	Dashboard →	Google App, Infogr.am, Plot.ly
Progress report	Local/state officials	Press release/article	Narrative report →	Atlas, Datawrapper, Google App
Evaluation report	Funders	Social media	Data report →	Tableau, Highchart, Plot.ly
Systems change	Multisector stakeholders	Multiple media	Data story →	Tableau, Infogr.am, Datawrapper
			Infographic →	Piktochart, Easel.ly, Canva

Activity analysis examples: From info to impact

Context		Story		
Activity	Audience	Communications Strategy	Storytelling Technique	Suggested Tool(s)
Advocacy	General public	Social Media	Infographic	Piktochart
	External stakeholders	Blog post, email list	Interactive report	Tableau
Policy Campaign	Local/state officials	Blog post, web page	Policy brief	Datawrapper
	Local media	Press release	Data story	Tableau Storypoints
Narrative Report	Board	PDF	Mixed media	Excel App
	General public	Guest editorial	Polemic	Atlas, Datawrapper
Progress Report	Project team	Intranet	Dashboard	Tableau, Google App
	Project team, Mngt.	Email re: a milestone	Data viz	Atlas, Charted
Final Evaluation	Internal stakeholders	PDF	Data report	Datawrapper, Google App
	Funders	Web page	Data story	Tableau Storypoints

Data Viz Tools' Major Strengths and Limitations

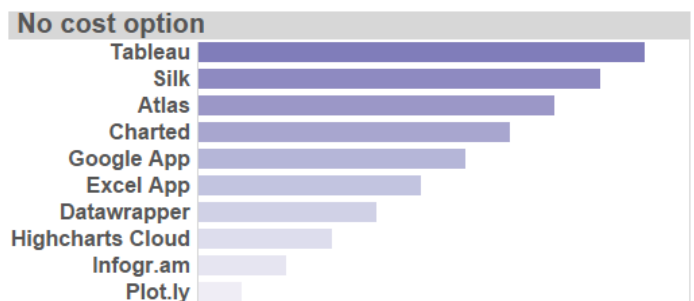
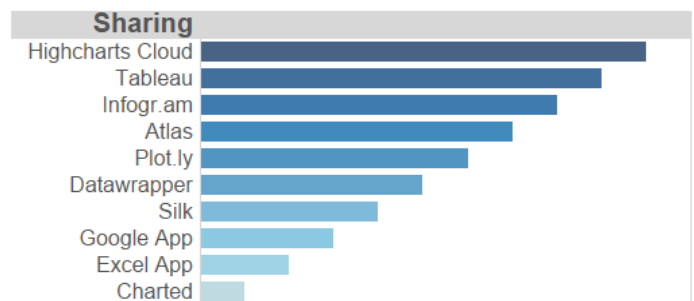
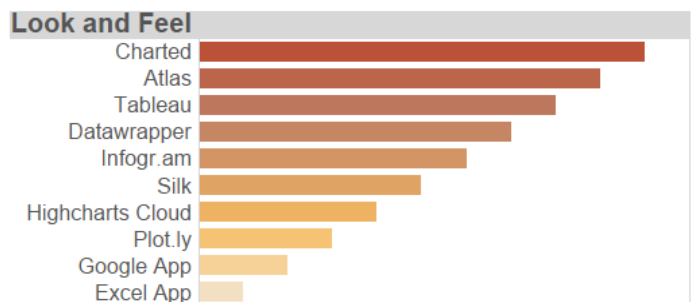
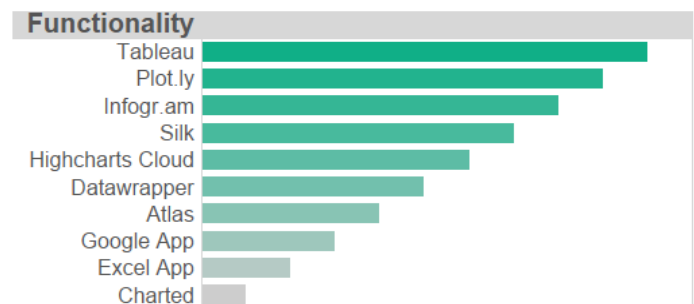
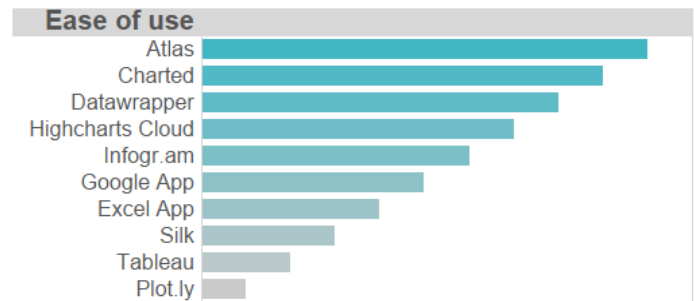
A quick offering of each tool's best features, and where they come up short.

Data viz tool	Big love for...	Could do without...
Atlas	Totally simple and very pretty	No details on hover, no maps
Charted	No options = no fuss	No options = no design choices
Datawrapper	Balance between functionality and cost	No PDF download in free plan
Excel App	Maintainable by average Excel user	Clumsy; lack of stability
Google App	Workflow integration and collaboration	Lack of stability; high maintenance
Highcharts Cloud	Excel on web-enabled steroids	Excel on web-enabled steroids
Infogr.am	Animated effects; icons; analytics	Distracting branding
Plot.ly	Statistical analysis; collaboration	Learning curve; no free PDF download
Silk	Multimedia integration	External URL only; no longer supported!
Tableau	Complete flexibility and customizability	Load time; Tableau Zen Master envy

Very Quick Picks!

Overall Rank	Data Viz Platform
1	Tableau
2	Atlas
3	Infogr.am
4	Highcharts Cloud
5	Datawrapper
6	Charted
7	Silk
8	Plot.ly
9	Google App
10	Excel App

These rankings are subjective, based on my experience with each of the tools. I do extensive work in Tableau Public and Excel, a moderate amount of work in Google, Infogr.am and Datawrapper, and minimal work in Atlas, Charted, Highcharts Cloud, and Plot.ly. The rankings are no doubt influenced by my proficiency in each of the tools based on my level of use. You might have a different experience than I, or your aesthetics might bend in a different direction! Yet these rankings might give you a place to start as you determine which tool best meets your needs.



Resources

A very short list of helpful resources for DIY data viz. Also note that most of the tools reviewed here provide guides, online tutorials, and emails regarding viz design.

Email newsletters

- Tableau Public | In the Public Eye

Weekly inspiration through the Tableau Public Viz of the Week.

- FlowingData | Newsletter by Nathan Yau

Visualization in an everyday context with data viz platform reviews, visualizations, R tutorials, etc.

Blogs

- VizCandy by Kelly Martin

Tableau dashboard tips, tutorials re: statistics and design; plug-in reviews and more.

- VizWiz | Makeover Monday by Andy Kriebel

Revamps a viz found in the wild with notes about design principles and best practices.

- Chandoo by Purna Duggirala

Intermediate to advanced Excel techniques with downloadable workbook demonstrations.

Best practice guides

- Sunlight Foundation

A short and practical guide to best practices for published data visualizations.

- Tableau

Tableau provides many user guides, including an impressive manual on data viz best practices.

- School of Data - Viz Survival Guide

The Data Visualization Survival Guide offers many tips and tricks in a slide deck and video.

