

Hackathon Visualization Technology Primer

With the hackathon we are aiming to create visualizations that can be modified, scaled and potentially co-published with the creators and the hackathon organizers. For this to be possible we want to provide you a list of technology that is flexible, scalable and potentially open source. Participants are free to use any software or visualization library they prefer, regardless if they are listed below. We are providing some inspiration for software and libraries that worked well for us in and that we are able to reuse and expand upon.

Software/Library (language)	Pros/Cons	Best used for
D3.js https://d3js.org/ (Javascript)	Difficult to learn, but most flexible library around. Lots of examples for reuse.	Dynamic visuals with animations that can be fully customized
Flourish https://flourish.studio/ (none/Javascript)	Easy to upload data create multi-step visualization stories; No or limited programming required; WRI can provide access Limited visuals;	Tell a simple story step-by-step with multiple visualizations.
Highcharts https://www.highcharts.com/demo (Javascript)	Simple library with configurations for standard charts.	Standard charts that need only some level of customization.
Google Charts https://goo.gl/Jv6Te (Javascript)	Simple library with configurations for standard charts.	Standard charts that need only some level of customization.
Esri Story Maps https://storymaps.arcgis.com/en/ (none/JSON)	Combines mapping with storytelling. Easy to map based step-by-step stories. Maps can be based on ARCGIS online.	Switching between maps to tell stories
Carto (Javascript/JSON)	Good performance for mapping. Can be customized. Requires account.	Custom build maps with lots of configuration.
Tableau (none)	No programming required. Limited options. If not build well reusability not ensured. Not recommended by WRI.	If no programming skills are present.
Matplotlib	Requires beginner to	Customized plots where user

(Python)	intermediate knowledge of Python. Rich set of examples & tutorials online.	wants to be able to manipulate details & design
Bokeh (Python)		An interactive visualization library that targets modern web browsers for presentation